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JAMES J. DAVIS, Secretary
BUREAU OF LABOR STATISTICS
ETHELBERT STEWART, Commissioner

MONTHLY LABOR REVIEW

Vol. XXIII, No. 4



October, 1926

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- Filipino contract laborers in Hawaii, p. 4
- Building permits in principal cities, p. 61
- Productivity of labor in various industries, p. 10
- Wages and hours in the British steel industry, p. 131

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HERBERT STEWART, Commissioner

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This Issue in Brief

For several years Filipino laborers in large numbers have been going to the Hawaiian Islands under a contract system. This system has been so effective that at present it is estimated that 70 per cent of the agricultural laborers in the Territory are Filipinos, and immigration of other races to the islands has practically ceased. On page 4 is given a summary of a report of the Director of Labor of the Philippines on the operation of this contract system and on the living conditions of Filipino workers in Hawaii.

The output per man-hour in the cement industry increased 57.8 per cent between 1914 and 1925; 39 per cent in flour milling; and 28.2 per cent in the leather industry. Only in sugar refining, of the four industries studied in the present issue, is there question as to a considerable increase in output per man-hour. Page 10.

Great increase in labor productivity at marine terminals is being effected through the displacement of dock laborers by electric trucks and tractors. At least 45 concerns operating one or more New York piers are using such equipment with profit. The Holland-American Line has found that 5 trucks with drivers can work two bulkheads, whereas the same job formerly called for 16 men. The average daily cost for the operation of each truck is \$2.68. Page 32.

Wages in the British iron and steel industry in the spring of 1926 are shown for certain occupations in certain districts, on page 131. These figures were obtained by a representative of the Bureau of Labor Statistics, and, although fragmentary, offer interesting comparisons with similar figures for the United States and other countries. Detailed data regarding wages and hours of labor in the American steel industry are presented for seven departments in an article on page 124.

Government employment includes many occupations with a high accident hazard. In 1925 there were more than 20,000 accidents, including some 300 fatalities, among the 538,000 persons under the Federal civil service. Data recently compiled by the Federal Employees' Compensation Commission give accident frequency rates by principal governmental departments and by years from 1921 to 1925. Page 1.

A health survey of 15 Illinois cities shows a range of from 41.5 to 81.2 in their percentages of the standard score for all health services in 1925. Evanston ranked the highest and East St. Louis was at the bottom of the list. Health in many of these cities is menaced by open wells and privies. The average score for sanitary supervision of the milk supply was very low, 42.3 per cent, while the average rating for popular health instruction was only 29 per cent. Page 53.

Skin diseases of an occupational origin constitute one of the widespread hazards of industrial employment. These lesions may vary, according to the specific effect of the various agents, from a moderate cutaneous reaction to malignant growths. Some of the most

dangerous substances are arsenic, certain of the petroleum and shale oils, soot, and tar, while other substances such as chrome may cause a lifelong irritation but carry no danger of malignancy. It is only recently that it has been realized that some of these materials may produce cancerous growths only after many years of exposure or even long after the exposure has ceased. Page 51.

The total amount of building construction in the United States decreased in the first half of 1926 as compared with the first half of 1925, as measured by building permits issued in the 68 large cities covered by the survey of the Bureau of Labor Statistics. The building of one and two family dwellings declined sharply during this period, but the apartment-house type of building increased in both number and total cost. Page 61.

The old-age pension act of Kentucky, in effect June 24 last, is not compulsory, but authorizes each county to adopt the plan. The maximum pension provided for is \$250 per year. This is the fifth old-age pension act in effect in the United States, the others being those of Montana, Nevada, Wisconsin, and Alaska. Page 58.

Disapproval of "industrial courts" is expressed in the report of a committee of the American Bar Association. The committee holds that efforts to settle industrial disputes by judicial methods have failed. Page 35.

Three trade-union institutes held at Brookwood Labor College in the summer of 1926 dealt, respectively, with labor problems in the textile industry, in the development of giant electric power, and in railway operation. All three conferences brought into relief the importance of trade-union preparedness to keep pace with new industrial developments. Emphasis was placed on the need for research by the labor organizations calling these institutes. Page 119.

Why the doctrine of employer's liability has become so generally discredited is suggested by a decision denying damages on the ground of assumption of risks, where the employer had apparently violated every applicable statute enacted for the employee's protection. Page 97.

The large number of strikes in China during recent years is indicative of the social changes taking place in that country. According to a study made for the Bureau of Labor Statistics by Prof. Ta Chen, of Tsing Hua College, the average number of strikes (not including those arising as a result of the May 30, 1925, affair in Shanghai) during the eight-year period 1918-1925 was 70, and the average number of strikers, 111,527, with data as to the number of strikers not available for about half of the strikes reported. The study analyzes the various strikes by industries, causes, and results. Page 99.

The workers' education movement in Palestine is rapidly extending. Evening classes are at present being carried on in 22 different localities, and the number of students has increased from 900 in 1921 to 3,800 in 1925. A brief report on the various other activities of the education committee of the Federation of Jewish Labor in Palestine is given on page 122.

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Accidents Among Government Employees

GOVERNMENT employment is often thought of as essentially clerical and as such devoid of any special accident hazards. As a matter of fact, however, large divisions of the work of the United States Government involve serious hazards. Thus in the Federal navy yards and arsenals large numbers of men are engaged in work comparable in danger with many of the most hazardous private industries. The engineers' division of the War Department, the fire-fighting work of the Forest Service of the Department of Agriculture, and the Reclamation Service of the Department of the Interior are examples of other branches of Federal employment in which there are very marked dangers to life and limb.

Because of this, and also because of the importance of the Federal Government as an employer of labor, the matter of accidents and the need of accident prevention in the several Government departments becomes of serious importance. Thus in the year 1925 the total number of employees reported by the Civil Service Commission was 538,290, and the total number of accidents during the year, 20,688, of which more than 300 resulted fatally.

The following table shows the number of accidents and the accident frequency rates for United States Government employees, by departments and by years, from 1921 to 1925, and also the averages for the five-year period. The accident data have been compiled by the United States Employees' Compensation Commission, and the accident frequency rates have been computed from these data and data regarding the number of employees by departments as reported by the Civil Service Commission.

Reference to the table shows that for the whole Government service conditions did not improve over the five-year period, the accident frequency rate rising almost steadily from 13.13 per million hours' exposure in 1921 to 15.37 in 1925. In two of the departments—the Government Printing Office and the Navy—there was a marked improvement during the five-year period. In all the other departments the accident rate rose during the period, the rise in some instances—as in the Departments of Agriculture and of the Interior—being quite marked.

In considering the trend of the accident rates for individual departments, as here presented, it must be borne in mind that the activities of a department may not have been quite the same over the period studied. Thus the reclamation work of the Department of the Interior is largely responsible for the fatal accidents in that department, and the amount of such work varies from year to year. Therefore a rising accident rate for a whole department does not necessarily indicate a lessened safety activity. An analysis of this nature would require detailed statistics by departmental divisions and also by accident causes. The figures presented, however, are of much

interest in connection with the general industrial-accident-prevention campaigns now being carried on by various public and private agencies.

In computing the man-hours presented in the table, an eight-hour day is assumed for all Government employees. As a matter of fact average hours for all employees are less than 8 hours, and thus the true accident rates computed on accurate man-hours would probably be somewhat higher than those given in the table.

ACCIDENT FREQUENCY IN THE GOVERNMENT SERVICE, BY DEPARTMENTS, 1921
TO 1925

Year	Number of employees reported by the Civil Service Commission	Number of accidents reported			Number of accidents reported per 1,000,000 hours' exposure		
		Fatal	Nonfatal	Total	Fatal	Nonfatal	Total
All Government Service							
1921.....	560,673	362	18,042	18,404	0.25	12.88	13.13
1922.....	535,185	353	17,905	18,258	.26	13.38	13.64
1923.....	535,781	279	17,713	17,992	.20	13.22	13.43
1924.....	546,981	278	20,260	20,538	.20	14.82	15.02
1925.....	538,290	314	20,374	20,688	.23	15.14	15.37
Total.....	2,716,910	1,586	94,294	95,880	.23	13.88	14.11
Department of Agriculture							
1921.....	18,722	10	638	648	0.22	13.63	13.85
1922.....	19,773	11	919	930	.22	18.59	18.82
1923.....	20,078	17	971	988	.34	19.34	19.68
1924.....	20,385	25	1,287	1,312	.49	25.25	25.74
1925.....	20,098	26	1,291	1,317	.52	25.69	26.21
Total.....	99,056	89	5,106	5,195	.36	20.62	20.98
Department of Commerce							
1921.....	11,748	9	246	255	0.31	8.38	8.69
1922.....	11,267	15	272	287	.53	9.66	10.19
1923.....	11,199	11	332	343	.40	11.86	12.25
1924.....	12,119	8	319	327	.26	10.52	10.79
1925.....	14,631	11	348	359	.30	9.52	9.82
Total.....	60,964	54	1,517	1,571	.35	9.95	10.31
Government Printing Office							
1921.....	4,403	2	89	91	0.18	8.09	8.27
1922.....	4,024	1	63	64	.10	6.26	6.36
1923.....	3,989	-----	42	42	-----	4.21	4.21
1924.....	4,269	-----	44	44	-----	4.13	4.13
1925.....	3,984	-----	27	27	-----	2.71	2.71
Total.....	20,669	3	265	268	.06	5.12	5.18
Department of the Interior							
1921.....	19,735	14	957	971	0.29	19.39	19.68
1922.....	17,834	18	1,041	1,059	.41	23.35	23.75
1923.....	17,092	16	1,415	1,431	.37	33.12	33.49
1924.....	16,679	19	1,676	1,695	.46	40.20	40.64
1925.....	13,125	11	1,019	1,030	.34	31.06	31.39
Total.....	84,465	78	6,108	6,186	.37	28.93	29.29

ACCIDENTS AMONG GOVERNMENT EMPLOYEES

3

ACCIDENT FREQUENCY IN THE GOVERNMENT SERVICE, BY DEPARTMENTS, 1921 TO 1925—Continued

Year	Number of employees reported by the Civil Service Commission	Number of accidents reported			Number of accidents reported per 1,000,000 hours' exposure		
		Fatal	Nonfatal	Total	Fatal	Nonfatal	Total
Department of Labor							
1921.....	3,768	1	112	113	0.11	11.89	11.99
1922.....	3,744	2	100	102	.22	10.68	10.90
1923.....	3,821		112	112		11.72	11.72
1924.....	3,876	1	111	112	.11	11.46	11.56
1925.....	3,614	5	107	112	.55	11.84	12.40
Total.....	18,823	9	542	551	.19	11.52	11.71
Department of the Navy							
1921.....	60,653	36	2,918	2,954	0.24	19.25	19.48
1922.....	42,515	27	1,516	1,543	.25	14.27	14.52
1923.....	40,557	30	1,423	1,453	.30	14.04	14.33
1924.....	42,686	28	1,882	1,910	.26	17.64	17.90
1925.....	42,842	24	1,662	1,686	.23	15.52	15.74
Total.....	229,253	145	9,401	9,546	.25	16.40	16.66
Post Office Department							
1921.....	281,658	62	5,218	5,280	0.08	7.42	7.50
1922.....	284,207	64	6,196	6,260	.10	8.72	8.81
1923.....	294,226	50	6,559	6,609	.07	8.92	8.99
1924.....	301,000	42	7,395	7,437	.06	9.83	9.89
1925.....	304,092	47	7,488	7,535	.06	9.85	9.91
Total.....	1,465,183	265	32,856	33,121	.07	8.96	9.04
Department of the Treasury							
1921.....	68,648	30	1,157	1,187	0.18	6.74	6.91
1922.....	56,392	44	1,203	1,247	.31	8.53	8.84
1923.....	53,604	17	938	955	.13	7.00	7.13
1924.....	53,121	16	1,013	1,029	.12	7.63	7.75
1925.....	52,607	22	1,037	1,059	.17	7.88	8.06
Total.....	284,372	129	5,348	5,477	.18	7.52	7.70
Department of War							
1921.....	53,553	124	6,125	6,249	0.92	45.74	46.68
1922.....	46,840	104	5,648	5,752	.89	48.23	49.12
1923.....	44,842	96	4,913	5,009	.85	43.82	44.68
1924.....	45,906	102	5,295	5,397	.89	46.14	47.03
1925.....	38,975	115	5,793	5,908	1.18	59.45	60.64
Total.....	230,116	541	27,774	28,315	.94	48.28	49.22
All other Government Agencies							
1921.....	37,785	74	582	656	0.78	6.16	6.95
1922.....	48,589	67	947	1,014	.55	7.80	8.34
1923.....	46,373	42	1,008	1,050	.36	8.70	9.06
1924.....	46,940	37	1,238	1,275	.31	10.55	10.86
1925.....	44,322	53	1,602	1,655	.48	14.46	14.94
Total.....	224,009	273	5,377	5,650	.49	9.60	10.09

Filipino Contract Laborers in Hawaii

FOR a period of several years Filipino laborers in large numbers have been going into the Hawaiian Islands under a contract system operated by the Hawaiian Sugar Planters' Association. So effectively has this system worked that at present it is estimated that 70 per cent of the agricultural laborers in Hawaii are Filipinos, and the immigration of other races has practically ceased. In September, 1925, the Director of Labor of the Philippine Islands made an investigation of the operation of the contract system and of the living conditions of Filipino workers in Hawaii, the report of which was approved by the officials of the "high-wage movement" and by the secretary of the Hawaiian Sugar Planters' Association. A résumé of his report is given below.¹

Procedure of Labor Recruiting

THE recruiting of Filipino laborers to work outside the Philippine Islands is regulated by an act of 1915 (Act No. 2486, as amended by Act No. 3148). This act provides that persons or corporations doing such recruiting shall be licensed by the Government; that laborers recruited shall be guaranteed their return passage, provided they comply with the terms of their contract or become physically incapacitated; and that all contracts shall be supervised by the director of labor, who shall not permit the contracting of minors under 15 years or of minors under 18 years without the consent of their parents or guardians. In addition, the Governor General is to appoint a commissioner for service in Hawaii, whose duty is to hear and adjust complaints of Filipino laborers, to see that the contracts are lived up to, and in general to look after the interests of such laborers.

The labor recruiting is done primarily through an agency established and maintained by the Hawaiian Sugar Planters' Association. This agency has its central office in the city of Manila and subagencies in various other parts of the islands. The recruiting agents do not receive any salary, but they receive what the director of labor calls "tempting" commissions, as follows: For each unmarried laborer from Manila, 5 pesos;² from other Provinces, 7 pesos; for each laborer with a family, 20 pesos.

Each labor applicant is submitted to a physical examination before final acceptance, by doctors representing the recruiting agency.

Form of Contract Signed by Laborer

UPON the acceptance of a laborer by the recruiting agency the laborer signs a general contract with the Hawaiian Sugar Planters' Association. Through this contract the laborer is guaranteed—

1. Free transportation, subsistence, and clothing for himself (and also his family, if any) from his home to the plantation in Hawaii to which he has been assigned.

¹Philippine Islands. Department of Commerce and Communications. Bureau of Labor. Labor, Manila, March, 1926.

²Peso at par = 50 cents.

2. Bonus of 10 pesos to unmarried laborers and 20 pesos to married laborers.

3. Free rent, water, fuel, and medical attendance during his stay on the plantation.

4. Free return transportation to his home in the Philippines, provided he has worked 720 days during three consecutive years.

5. A minimum wage of 40 pesos per month of 26 days, a day's work to consist of 10 hours in the field or of 12 hours in the factory. Wives doing laboring work are to receive 28 pesos per month, and children are to be paid according to the amount of work they perform.

The laborer thus contracts himself for a three-year period, but there is no penalty for violation other than the forfeiture of the guaranties, including free return transportation to the Philippines.

A central labor office, with a statistical division, is maintained by the Hawaiian Sugar Planters' Association in Honolulu. This office centralizes the recruiting work and keeps all the data relative to the recruited laborers.

Supervision by Philippine Government

THE Philippine Bureau of Labor does not intervene directly in the recruiting of laborers for Hawaii. It is, however, that bureau's duty to inspect all contracts signed by emigrant laborers, and to investigate to see that they are acting voluntarily and with full understanding of the terms of the contract. The bureau also keeps a list of all contracts, records the name, residence, and other details regarding emigrants, and makes periodical reports as to the number of outgoing and returning laborers.

The resident labor commissioner appointed to watch over the interests of Filipino laborers in Hawaii has his office in Honolulu. His duty in general is to protect the Filipino laborer from any form of exploitation. His specific duties are:

1. To receive and hear complaints of Filipino laborers and to defend their interests in the settlement of such complaints. These complaints may concern the interpretation of the contracts; questions regarding free transportation home to physically incapacitated laborers; and disputes over salaries and wages.

2. To inspect the plantations where Filipino laborers are employed.

3. To secure employment for Filipinos in Hawaii who for any reason are out of work.

4. To make a semiannual report to the Governor General of the Philippine Islands relative to the condition of Filipino laborers in Hawaii.

Emigrants Remaining in Hawaii

ACCORDING to the records of the bureau of labor Filipino laborers emigrating to Hawaii from 1909 to 1925, inclusive, numbered 74,242, including nearly 10,000 women and children. The total number returning from Hawaii during the same period was only 15,601. The details are shown in the following table:

FILIPINO LABORERS EMIGRATING TO AND RETURNING FROM HAWAII

Year	Emigrating to Hawaii				Returning from Hawaii			
	Males	Females	Children	Total	Males	Females	Children	Total
1909 to 1914.....	18,630			18,630	159			159
1915.....	1,777	180	193	2,150	260	40	47	347
1916.....	1,877	157	180	2,214	342	64	59	465
1917.....	2,191	178	229	2,598	568	72	93	733
1918.....	2,030	284	447	2,761	645	65	131	841
1919.....	3,181	319	297	3,797	677	104	167	948
1920.....	3,042	225	187	3,454	1,093	75	113	1,281
1921.....	5,748	628	438	6,814	1,953	249	503	2,705
1922.....	7,291	530	362	8,183	1,309	81	203	1,593
1923.....	4,516	1,800	945	7,261	1,226	112	158	1,496
1924.....	8,171	1,116	582	9,869	1,730	204	261	2,195
1925.....	6,099	256	156	6,511	2,255	267	316	2,838
Total.....	64,553	5,673	4,016	74,242	12,217	1,333	2,051	15,601

Occupations of Filipinos in Hawaii

THE Filipino laborers in Hawaii are chiefly engaged in the sugar fields, but a considerable number are city workers. The director of labor, in his report, estimates the number of Filipinos in Hawaii at about 40,000, of whom about 5,000, including women and children, are city dwellers. The remainder are engaged in agricultural labor, about 25,000, not including members of their families, being on the plantations of the Hawaiian Sugar Planters' Association.

Living Conditions of City Workers

AS REGARDS living conditions, the director finds that, in general, the city Filipinos are in a deplorable situation. Most of them originally came to Hawaii as contract sugar laborers, but for one reason or another drifted to Honolulu and the other cities of the Territory. Most of the work they are engaged in—such as stevedoring—is very irregular. Commenting on the way of life of these city laborers, the director says:

The conditions of life of the Filipino living in the cities, excepting those who have permanent work may be said to be difficult and miserable because of their irregular periods of employment. They find hardly enough to sustain themselves and I can affirm that a great number of them lack the necessities of life. Often they live by securing shelter and aid from their compatriots who are at work and earning their living. These people then become a veritable charge on those who do work and shelter them.

Living Conditions and Wages on Plantations

CONTRASTED with the living conditions of the Filipino laborers in the city, the director found conditions of the plantation laborers to be, in general, very good, except among time workers with families with the minimum wage of not over \$1 per day. However, he states that most of the laborers are employed on a contract basis and earn, with certain bonuses, an average of about \$2.40 per day. Under this contract the laborer, himself acting as a contractor, agrees to cultivate, harvest, etc., a certain parcel of land and to receive an agreed amount per ton for all the clean cane harvested. Details are also entered into regarding the allocation of bonuses, advances,

etc., and the contractor is authorized to hire laborers of his own under certain conditions.

A comparison of the wages of Filipino sugar laborers in Hawaii with the wages paid in the sugar fields of the Philippines, according to the director, is extremely favorable to Hawaii. In other words, the Filipino laborer benefits himself financially by emigrating to Hawaii. The following table compares the wage rates in the two countries for certain selected occupations in the sugar industry. The cost of living in Hawaii is estimated by the director as about 25 per cent higher than in the Philippines, but even allowing for this difference, all the comparisons are very favorable to the Hawaiian laborer.

DAILY WAGES IN MILLS AND FIELDS OF HAWAII AND PHILIPPINE ISLANDS

Nature of work	Hawaii ¹	Philippine Islands	Nature of work	Hawaii ¹	Philippine Islands
Cane carrier:			Boiling-house samplers—Contd.		
Unloading machines—season	\$2. 09	\$0. 50	Sewing machines	\$1. 38	\$0. 60
Other men	1. 79	. 50	Loading sugar—off season	1. 65	. 60
Unloading machines—off season	1. 93	. 50	Milling department:		
Other men	1. 65	. 50	Engine tenders	2. 23	. 60
Fireroom:			Oilers	1. 80	. 60
Firemen	1. 76	. 65	Cane feeders	1. 65	. 60
Trashmen	1. 53		Mill tenders	1. 52	. 60
Water tenders	2. 89		Mill repair gangs	2. 03	. 60
Boiling-house samplers	2. 29	. 50	Carpenter shop:		
Juice heaters and scales	1. 93	. 65	Car-repairing gang	2. 66	. 625
Settling tanks	1. 65	. 60	Painters	1. 90	
Evaporators	2. 09	. 50	Carpenters	2. 72	
Lime kiln	1. 93	. 50	Electricians—helpers, etc.	2. 67	1. 125
Filter presses, lunas	1. 53	. 50	Machine shop—helpers, etc.	2. 89	
Filter presses, others	2. 62		Loading cane (27 cents per ton in Hawaii)—average daily	2. 89	1. 50
Vacuum pans	1. 53	. 50	Cutting cane (21 cents per ton in Hawaii)—average daily	2. 46	1. 50
Crystallizers, mixers, sweepers	1. 98		Donkey engine		. 50
Engine and pump tenders	1. 83	. 60			
Centrifugal No. 2	1. 87	. 50			
Centrifugal No. 1—during season	2. 75	. 75			

¹ Including 10 per cent bonus.

² In the Philippines cutting and loading cane is usually paid for to the contractor, not to the laborers; and the contractor pays the workmen 2.50 pesos per week with rice and 0.10 pesos per day for food. In the foregoing table 1 peso per day is used as average wage.

The plantation worker, according to the director's report, in addition to his salary receives a so-called "turnout bonus" of 10 per cent of his salary, plus a profit-sharing bonus which varies with the price of sugar. When the price of sugar reaches 5 cents a pound, a profit-sharing bonus of 5 per cent is paid, when it is selling at 6 cents, a bonus of 15 per cent, when the price is 7 cents, a bonus of 25 per cent, etc.

It must be remembered also that in Hawaii food costs are lessened in many cases by laborers having a home garden in which they raise some of their vegetables. Also they have no house rent to pay and they have free fuel furnished them.

Cost-of-Living Budget of Filipino Laborer

ACCORDING to the director's estimate, an unmarried Filipino laborer can live on \$18 per month, the items being distributed as follows: Food, \$11.10; cigarettes, \$1.50; incidentals, \$1.80; washing, \$2; soap, 10 cents; clothing, etc., \$1.50. In the case of a

married laborer, this estimate is increased 50 per cent for the wife and 15 per cent for each child. Thus the minimum for a family with three children is \$35.10, which would necessitate a daily wage of \$1.35 for 26 working-days per month. Moreover, the above estimates include nothing for recreation, nor for a local tax of \$5 per year on each adult worker.

As a matter of fact, the great number of Filipino laborers in Hawaii are either unmarried or have left their families at home. Indeed, the great excess of unattached men and the scarcity of women is believed by the director to be a serious evil which needs to be remedied.

Housing Conditions

HOUSING, supplied free by the sugar plantations includes "a house (valued from \$900 to \$1,000) with modern hygienic and sanitary conveniences, including kitchen, bath, washhouse, odorless toilets with running water, wood and other fuels for cooking of their food, and water. The great majority of the houses are lighted with electricity at the cost of the occupant."

The plantations also furnish free medical service and free schools.

Financial Status of Departing and Returning Laborers

A SUPPLEMENTARY investigation was made by the Philippine Bureau of Labor of 1,000 laborers who left the Philippines for Hawaii in 1925 and of 500 Filipino laborers who returned from Hawaii to the Philippines during 1925.

Of the emigrants 996 were males, of whom two-thirds were married but had left their families at home. Almost all were between 21 and 35 years of age. About one-half owned real property of an average value of 312 pesos, the other half owning no property of any kind.

Of the 500 returning Filipinos, 346, or 69 per cent, were married, and 312, or 62 per cent, had been in Hawaii for at least three years. About 20 per cent of the returning laborers took no savings back with them, but the remaining 80 per cent averaged 433 pesos each. Moreover, the investigation showed that almost 90 per cent had, while at work in Hawaii, sent money averaging 734 pesos each to relatives in the Philippines.

Complaints of Laborers

DURING the course of his investigation, the director of labor received many complaints from individual laborers regarding working and living conditions. The director states that he was unable to verify the complaints and is thus unable to say whether they were justified. What appear to be the principal complaints, as reported by him, were as follows:

1. That the payment of the work for "long-term contract," for which the worker earns more than \$1 per day, is made tardily, and the workmen are unable to check up on the amount of work done and expenditures made under the contract system.

2. That many workers who participated in the recent strike are discriminated against.

3. That the labor commissioner does not inspect the majority of the plantations more than once a year, and that there is often delay in handling complaints sent to the commissioner.

As regards the complaint that the resident commissioner of labor is tardy in inspecting and following up complaints, the commissioner states that he has no assistants and some delay is therefore inevitable. The director also reports that the commissioner, the plantation managers, and himself agreed on a plan by which any important complaints by the laborers will be presented by the commissioner to the convention of the Hawaiian Sugar Planters' Association.

The plantation managers also made various complaints to the director regarding the Filipino laborers. Thus, while the general sentiment was that the Filipinos were satisfactory workers, certain managers complained of the instability of many of them, that they frequently pass from one plantation to another, thus confusing the records, especially as regards free return transportation to laborers fulfilling the terms of their contract, and also making it difficult to train Filipinos for the more responsible positions, such as camp bosses and overseers.

Conclusions

THE conclusions of the report may be briefly summarized as follows:

1. Some method is necessary to keep the Filipino from leaving plantation work, but without any sacrifice of his liberty.

2. The daily wage of \$1 paid to certain laborers is too low for men with families.

3. Free return passage to the Philippines should be given to laborers who were contracted for prior to 1915, when the act of the Philippine Legislature made this provision obligatory. Such free passage for men arriving prior to 1915 was not furnished by the Hawaiian Sugar Planters' Association as the act did not apply on the plantations of the said company when these laborers were taken to Hawaii. These laborers are not given free return passages by the Hawaiian Sugar Planters' Association on the ground that they do not work for the plantations belonging to the association at the time they apply for same.

4. A considerable number of Filipino laborers who were discharged from the Navy Yard and the Public Works Department for not being citizens of the United States should be reinstated, and, if necessary, the law should be amended so "as not to exclude Filipinos from said work."

PRODUCTIVITY OF LABOR

Productivity of Labor in the Cement, Leather, Flour, and Sugar-Refining Industries, 1914 to 1925

THIS is the second of a series of articles presenting indexes of the productivity of labor in American industries over a series of years. The first article appeared in the July issue of the *Labor Review* and covered the steel, automobile, shoe, and paper industries. The present article extends the study to four other industries—cement, leather, flour, and sugar.

Summary

ANALYSIS of the four industries covered in this study supports the general conclusions of the first article—namely, that although there are great variations as between different industries, a remarkable increase in productivity per man-hour has taken place during the period 1914 to 1925 in widely separated phases of manufacturing. In some industries, such as the automobile, the increased productivity is so great as to be almost unbelievable; in others, such as boots and shoes, it appears to be rather small; but in every industry studied so far there has been at least some increase.

Of the four industries included in this study, cement manufacturing shows the greatest increase in productivity, the output per man-hour having increased 57.8 per cent between 1914 and 1925. This industry has been favored by a tremendous increase in the demand for its product during the past four years, so that it has undergone considerable expansion, a situation which is usually favorable to increasing output per man-hour. Conditions in the leather industry are practically the reverse of this, for there has been a steady decline in leather production since 1923 and not very much of an increase in recent years over the production in 1914. Yet in spite of this situation the output per man-hour in the leather industry in 1925 was 28.2 per cent greater than in 1914, while a five-year average, 1921–1925, shows an even larger increase—34 per cent.

In flour milling, with production remaining practically constant throughout the whole period, there has been such a saving in labor that the output per man-hour was 39 per cent greater in 1925. In cane-sugar refining only are the results inconclusive and uncertain. The man-hour output does show a net increase of 27.3 per cent for the whole period, but this has been achieved during the last three years only; in the years following the war, 1919 to 1921, the productivity of labor declined about 20 per cent from the 1914 level.

Of the eight industries studied so far, one—the automobile industry—has shown an increase in man-hour output for the period

1914 to 1925 of over 200 per cent; six industries have shown increases ranging from 25 per cent to 60 per cent, while in the boot and shoe industry the increase has been 16.5 per cent, which is somewhat below the average.

These indexes have been constructed for the purpose of measuring the change in productivity. All questions as to the causes of this increase or to its effects upon our economic life, while extremely interesting, are outside the scope of this study. When we have succeeded in getting at the facts and in measuring, with a fair amount of accuracy, the real increase in productivity, then there will be some scientific basis upon which to discuss policies and programs of action. It is the purpose of this study to furnish the facts of the situation.

Portland Cement Industry

Index of Production

THE manufacture of Portland cement differs from all the industries previously considered in this series in two important respects: (1) It is to a certain degree an extractive industry, and bears some resemblance to other extractive industries, such as mining, lumbering, farming, fishing, etc., in that the output is dependent to some extent upon the richness of the deposits of raw material and the condition of the weather; (2) the output of the industry consists of a single product, practically uniform in quality and easily measurable in quantity. From a statistical point of view, there is no problem of weighting, combining indexes, or estimating the total value of the product as must often be done in other industries. The only operation involved in making an index of production is to reduce the actual production figures to percentages. Fortunately, too, the gathering of the data has been well done, and the figures are complete and accurate. The Bureau of Mines, Department of Commerce, furnishes annual production statistics, while the Census of Manufactures covers the census years—1914, 1919, 1921, and 1923. The two sets of figures are extremely close together in the census years, with the census figures slightly larger in each case, because the census contains reports for all kinds of cement produced. However, Portland cement constitutes about 99 per cent of all the cement produced in the United States, so the other kinds may be disregarded. The index of production used here is derived from the annual data of the Bureau of Mines on Portland cement production.

Index of Employment

The employment figures come from the Census of Manufactures, supplemented by the reports of the Bureau of Labor Statistics in recent years. The census figures show that the number of men employed remained practically constant at about 30,000 in 1914, 1919, and 1921; but coincident with the great increase in production beginning in 1922, the number increased rapidly to around 40,000 in 1923, where it has remained since.

The only data available on hours of labor is found in the census reports, which contain data on the number of workers classified according to the length of the standard full-time working week.

The average full-time hours per week for all workers in the industry are as follows: 1914, $63\frac{3}{4}$; 1919, 61; 1921, $60\frac{3}{4}$; and 1923, $60\frac{1}{4}$. The actual reduction in hours may have been somewhat greater than this. When it is noted that about 66 per cent of all the wage earners were listed as working "over 60" hours per week in 1914, over 40 per cent were so listed in 1919, nearly 40 per cent in 1921, and almost 37 per cent in 1923, it becomes evident that reductions in hours, such as from 72 to 66, while it would mean a pronounced reduction in the average hours of labor in the industry, would have no effect at all on the above averages, since the evidence of the change would not appear in the census figures. Therefore, it is not claimed that the index of full-time hours per week in the cement industry is substantially accurate although it may possibly be very accurate. Besides, there are two other points to be taken into consideration: (1) The salaried employees work longer hours than the other men where the 8-hour shift exists for the men engaged in the continuous operations, and shorter hours than the men employed on 12-hour or 11 and 13 hour shifts. Since the salaried employees constitute between 13 per cent and 16 per cent of the total working force, this might be of some importance in the final average. (2) There are no data at all on the subject of actual hours worked per week, as distinguished from the standard full-time hours. There is no material on overtime, part time, absences, turnover, etc., which at times vary so much as to prevent the standard hours from being a good indication of the amount of work performed.

With these limitations in mind, the index of full-time hours can be multiplied by the index of men employed to get an index of man-hours for the industry; and despite the gaps in the data outlined above, it is probable that the resulting index of man-hours is fairly accurate.

Index of Productivity

The final step consists in dividing the index of production by the index of man-hours to get the productivity. This is shown in the following table:

TABLE 1.—INDEX OF PRODUCTIVITY IN THE CEMENT INDUSTRY

Year	Production index	Employment index	Productivity index	Year	Production index	Employment index	Productivity index
1914.....	100.0	100.0	100.0	1923.....	155.7	120.0	129.8
1919.....	91.1	89.7	101.6	1924.....	168.7	119.8	140.8
1921.....	111.4	92.1	121.0	1925.....	182.8	115.9	157.8

Production figures, not given in the above table, show that the output in 1916 and 1917 was larger than in 1914, but in 1918 the production index fell to 80, from which point it increased to 91 in 1919. Despite this great falling off in production there was no decrease in productivity, which is rather surprising, for usually the reduction in employment does not keep pace with the reduction in output. It is quite natural, however, that the great expansion in output in recent years should not require a proportionate amount of man-hours. Under ordinary conditions very few plants in an industry are working to capacity throughout the year, and most industries are over-

equipped in the sense that it is possible to expand production considerably with very little addition of men or equipment. Giving this point all due consideration, however, the increased output is still quite remarkable. It can be partly accounted for by the installation of larger and better machinery, and the tapping of good mines.

Leather Industry

Index of Production

THE calculation of an index of production of "leather, tanned, curried, and finished" is beset with difficulties. Leather is produced from the hides or skins of cattle, calves, sheep and lambs, goats and kids, deer, elk, kangaroos, horses, and numerous other animals; the product is in the form of sole, belting, upper, patent, harness, book-binding, and glove leather, to mention the more important kinds. To make matters worse, sole and belting leather is measured in pounds, while nearly all other kinds are measured in square feet. Lastly, the production figures prior to 1921 are somewhat conflicting and uncertain.

The method here used was that of constructing an index for sole and belting leather and another index for upper leather including patent, combining these two in order to get the general index of production. This has the effect of confining the index to that leather which goes into the making of shoes and belting, no account being taken of harness, glove, valise, and other kinds of leather. The omission is unimportant, however, for in 1922 about 90 per cent of all cattle hides, 99 per cent of all calf and kip skins, 98 per cent of all goat and kid skins, and about 50 per cent of all sheep and lamb skins, went into shoe leather and belting. Therefore, the leather index used here is sufficiently inclusive to be sound.

Statistics on the production of leather from 1921 down to date are admirably complete. In accordance with an act of Congress passed in June, 1920, the Bureau of the Census has compiled and published monthly figures on leather production which cover the output down to the smallest details. Probably in no other industry do we have such a thorough census of all products. In addition to this there are the reports of the Tanners' Council which carry the figures back to 1918; and the United States census furnishes the material for 1914. Practically all figures prior to 1921, however, are uncertain. The Tanners' Council statistician, by working over the census figures for the census years from 1899 to 1914, has made an attempt to secure for this earlier period figures on production which are comparable to the Tanners' Council figures for 1918-1920. Unfortunately, however, there is a serious discrepancy between the census figures for 1919 and those submitted to the Tanners' Council by the members, and the discrepancy is in the wrong direction—the census figures are smaller. This makes it difficult to decide which set to use. With 1914 as a base the census index for 1919 is 119, while the Tanners' Council data give an index of 131. Further analysis shows that the discrepancy can be traced to sole and belting leather, where the margin in favor of the Tanners' Council is 15 per cent and 30 per cent, respectively, and to sheepskin upper leather, where the council reports show almost twice the production that the census does. The figures for 1921-1925 are almost identical, so

there is no problem here; the question is whether the census or the Tanners' Council is the better guide for 1919, and a decision is complicated by the fact that the only available figures of any kind for 1918 and 1920 come from the Tanners' Council. The solution adopted was that of a compromise, explained below.

The construction of the final index of leather production consisted in reducing all sole and belting leather to pounds and all upper leather to square feet. This was done by the conversion table used by the Census Bureau: Cattle side for sole leather, 15 pounds; sheepskin, 8 square feet, calfskin, 10 square feet, etc. These two sets of figures were then reduced to index numbers, which were combined to form a composite index of production with weights of 2 for upper leather and 1 for sole leather and belting. These weights are at best merely approximate, and are not based upon any specific method of weighting; cattle hides are divided about in equal proportions between upper leather and sole and belting leather, while all the calf, kip, goat, and sheep skins covered by the figures used here go into upper leather. Assuming that cattle hides are about as important as all other skins combined, this would make upper leather twice as important as sole and belting.

Unfortunately, the question of weighting is very important because the two indexes are so widely divergent. The production of sole and belting leather has steadily declined in recent years so that in 1925 the amount produced was less than 85 per cent of the 1914 output, while the production of upper leather increased about 30 per cent in the same period. Combining two such divergent indexes as 85 and 130 to form a composite index is very risky unless the weighting is correct; if upper leather is rated at 2 to 1 compared to sole and belting the resulting composite is 115, while if the weights were reversed the composite would be only 100. Therefore, it was considered advisable to make a test index by some entirely different method. This was done by using Prof. Irving Fisher's formula 2153.¹ The price data necessary for this computation can be found in the Survey of Current Business for February, 1926 (p. 52). Professor Fisher considers that this formula 2153 gives an index number which for all practical purposes is just as accurate as his "ideal" formula 353. Therefore, the remarkably close correlation between this test index and the simple weighted index ought to be sufficient proof of the soundness of the weights. In the table below there is given a series of indexes for comparative purposes.

TABLE 2.—COMPARATIVE INDEXES OF PRODUCTION OF LEATHER

Year	Final composite index			Census data simple weighted index	Tanners' Council data	
	Sole and belting	Upper leather	Combined index		Simple weighted index	Test index formula 2153
1914.....	100.0	100.0	100.0	100.0	100.0	100.0
1918.....	117.8	103.2	108.1	---	109.1	110.3
1919.....	133.2	123.9	127.0	119.0	131.2	131.0
1920.....	108.5	104.3	105.7	---	107.0	106.8
1921.....	102.0	105.8	104.6	104.7	103.4	103.5
1922.....	98.6	140.6	126.6	128.0	126.3	125.0
1923.....	108.1	147.6	134.4	135.7	134.5	133.3
1924.....	85.3	130.2	115.2	116.4	115.5	114.8
1925.....	82.3	129.3	113.6	114.7	113.5	112.8

¹ Fisher, Irving: The Making of Index Numbers, Boston, Houghton Mifflin Co., 1922.

There are several points worth noting in the above table, one in particular being the great divergence, at times, of the sole and belting index from the upper leather index. In the war years the latter fell behind, but in 1922 the production of sole leather fell below the output of 1914, and excepting for the year 1923 it has fallen ever since, until in 1925 the index was only 82.3. The close agreement between the simple weighted index and the test index, both derived from the Tanners' Council figures, shows that the process of assigning fixed weights of 2 for upper leather and 1 for sole and belting results in a satisfactory index. For the sake of simplicity the fixed-weights method was applied in the derivation of the final composite index. The third point to be noted is that this final index represents a compromise between the Tanners' Council figures on production and the census figures. The only serious discrepancy was in 1919, and the compromise consisted in using whichever one of the divergent figures for this year seemed the more accurate in the light of other data. In some cases the census figures were used; in others those of the Tanners' Council. For the years 1918 and 1920 the only available figures were those of the Tanners' Council. On the whole, excepting for the year 1919, the close agreement of all the indexes is encouraging. This indicates that the original figures probably represent quite accurately the actual leather production, and that the method of turning these figures into an index is sound.

Index of Employment

In addition to the census figures on employment for 1914, 1919, 1921, and 1923 there is the index of employment constructed by the Bureau of Labor Statistics covering the period 1916 to 1925. The census figure for 1919 is somewhat larger than the bureau's, and the bureau index is adjusted upward to fit it. This permits the use of the bureau indexes for 1918 and 1920, thus furnishing an employment index for every year for which there is a production index. The computation of the hours of labor in the industry shows that the working week in 1914 was about 57 hours, fell to $50\frac{3}{4}$ hours in 1919, and rose again to $51\frac{1}{4}$ in 1921 and $51\frac{2}{5}$ in 1923. There is no material to be found as to the hours actually worked by the men; the above figures are for official standard hours. By subtracting the hours index from the original index of employment there is derived the final index of man-hours.

Index of productivity

The production and employment indexes are combined to form the productivity index, as given in the table below.

TABLE 3.—PRODUCTIVITY INDEX FOR LEATHER

Year	Production index	Employment index	Productivity index	Year	Production index	Employment index	Productivity index
1914.....	100.0	100.0	100.0	1922.....	126.6	93.4	135.5
1918.....	108.1	106.5	101.5	1923.....	134.4	96.2	139.7
1919.....	127.0	115.3	110.2	1924.....	115.2	86.0	134.0
1920.....	105.7	104.3	101.3	1925.....	113.6	88.6	128.2
1921.....	104.6	78.7	132.9				

It is at once apparent that the lack of adequate data on the hours actually worked by the employees prevents the calculation of an accurate index for the depression year of 1920. When the depression first comes, most plants work only part time, but keep all their men; it is not until the extent and importance of the slack times become evident that the working force is reduced, as is shown by the figures for 1921. It should be remembered that the leather industry was perhaps the very first industry to be hit by the depression, for leather prices began to drop in the first months of 1920, while many industries experienced no check until early in the summer. In the same manner leather recovered very early in 1922, before most industries were even out of the depression. The industry has also been eccentric during the last two years, in that it has suffered a steady decline of output. Nor do the production figures for the first four months of 1926 show any improvement. Leather, of course, is used mostly for making shoes, and the hard times in the shoe industry have been reflected in the leather industry.

If, as in the case of other industries, 1924 is considered as more nearly comparable with 1914 than any other recent year, then the increased productivity for the leather industry is 34 per cent. The five-year average for 1921-1925 is also 34 per cent, indicating that this figure probably represents the improvement in productivity in leather for the decade. In view of the declining output in recent years, this increased productivity is surprising.

Flour Milling

Index of Production

STATISTICAL data on production in this industry are very similar to those in leather tanning—fragmentary and uncertain. There is one complete set of figures on the annual production of wheat flour from 1914 down to date, gathered and computed by the United States Grain Corporation prior to July, 1920, and since that time by Russell's Commercial News. The Census of Manufactures also furnishes data on wheat-flour production for the census years, but unfortunately there is considerable discrepancy in the two sets of figures. The following statement will make clear the situation:

TABLE 4.—WHEAT-FLOUR PRODUCTION, 1914 TO 1923

Source	1914	1919	1921	1923
	<i>Barrels</i>	<i>Barrels</i>	<i>Barrels</i>	<i>Barrels</i>
United States Census.....	118,404,000	132,466,000	110,846,000	114,439,000
Russell's Commercial News.....	118,435,000	133,092,000	121,224,000	125,760,000

In view of the fact that both sets were fairly close together as long as the United States Grain Corporation was gathering the data, it appears that the disjunction took place when the work was taken over by Russell's Commercial News in 1920. One strong point in support of the census figures is that they are consistent with themselves in relation to the amount of wheat milled. The number of bushels of grain milled in the years given above (according to census figures) is, in every case, almost exactly 4.7 times the figures for

barrels of flour produced. A barrel of flour is usually considered the equivalent of $4\frac{1}{2}$ bushels of wheat, so that the close correlation between the amount of grain milled and the amount of flour produced constitutes independent evidence that the census data on flour are correct.

However, there is also considerable evidence of the soundness of Russell's figures. A check on the imports, exports, and quantity of grain used in other ways seems to show that there must have been around 120,000,000 barrels of flour produced in 1921. In addition to this, there is the fact that the figures shown by the independent census of the Department of Commerce for 1924 and 1925, when prorated to 100 per cent production, give results extremely close to those of Russell for 1924 and 1925.

There is still another point of importance to be taken into consideration. Wheat flour, while it is by far the most important, is not the only product of the milling industry; there are also corn meal, bran and middlings, and feed, screenings, etc. True, the output of wheat flour is of greater value than the output of all three others combined, but the latter are important enough to have considerable influence on an index number of production, especially in view of the fact that the output of each of these seems to vary quite independently of the others. Wheat flour alone is by no means a good index of the amount of milling being done, except in the larger mills, which are more apt to grind wheat exclusively.

The construction of a satisfactory index of production involves, therefore, the combination of the four principal products, the output of which is given in the Census of Manufactures. Wheat flour and corn meal production are given in barrels of 196 pounds each, while bran and feed are measured in short tons. The easiest method seems to be to reduce them all to pounds and add to get the total, though this has the disadvantage of overweighting the by-products since it does not make allowance for the greater amount of work put in on the flour. At any rate, this method insures against any overestimation of production due to the greater increase in wheat flour output.

Unfortunately the census figures come to an end in 1923, and for 1924 and 1925 there are no figures for anything but flour production; It happens that 1924 was a banner year for wheat flour, but, as we know, from the size of the corn crop that there must have been a great decrease in corn-meal production and perhaps in feed and bran production, a flour index for 1924 would be much too high. In the absence of any corrective figures at all, the only alternatives are to omit the index for 1924 or to make a guess at it. It was decided that perhaps an index exactly equal to the 1923 index would not be far wrong for 1924, so this figure is included purely as a guess. By 1925, corn production had righted itself and wheat flour output had fallen almost to the 1923 level, so the wheat flour index on a 1923 base was used as the composite index for 1925.

Index of Employment

The Census of Manufactures for 1923 and for 1921 are not strictly comparable with the two preceding censuses for the reason that beginning in 1921 the minimum-size establishment for census purposes

was changed from one with a total annual product of \$500 to one with products valued at \$5,000. In most industries this change has practically no influence on the comparability of the figures, but in flour milling the number of small establishments is so great that some allowance had to be made for this in the employment figures. The method used was that of subtracting from the total employees given in 1914 and 1919, the number working for firms with a product between \$500 and \$5,000; and in doing this it was necessary also to subtract a certain number of proprietors, for in a small-scale industry like this the proprietors are very numerous and are, in many cases, workmen.

The next step was the computation of the standard full-time weekly hours in the usual way. The weekly hours in 1914 averaged slightly under 59, in 1919 about 55, in 1921, $54\frac{1}{4}$, and in 1923, $54\frac{1}{4}$. There has probably been no change in this since 1921, and the index was calculated on this basis. The index of full-time hours was then multiplied by the employment index to get the man-hours index.

Index of Productivity

The index of production was then divided by the index of employment to derive the index of productivity, shown in the table below.

TABLE 5.—PRODUCTIVITY IN THE FLOUR-MILLING INDUSTRY

Year	Production index	Employment index	Productivity index	Year	Production index	Employment index	Productivity index
1914.....	100	100	100	1923.....	98	78	126
1919.....	104	110	95	1924.....	1 98	74	133
1921.....	93	77	120	1925.....	1 98	71	139

¹ Estimated. See explanation in text.

The fact that the production is fairly constant should not occasion surprise, for this is to be expected in an industry supplying a basic food product; and in addition it should be noted that the winter wheat crop in 1914 was exceptionally large. The high production index of 1919 is due almost entirely to wheat-flour production for export to Europe. The exports of wheat flour in 1919 were unusually large. In 1921 the exportation of flour fell off, but that of wheat reached the highest point of the period 1913 to 1925. This combination explains the small amount of milling in this country in 1921. With reference to productivity it is obvious that the improvement has come about by the decline in employment. The industry in 1925 turned out almost as much product as in 1914, with only 71 per cent of the employment.

In view of the fact that the above index of production is such a patchwork of different sets of figures, it will be worth while comparing it with the simple wheat-flour index of Russell's Commercial News. As stated before, wheat flour is not necessarily a good index of output in the milling industry, but it is certainly the most important product. Therefore, an index of productivity has been constructed from the flour-production index only.

TABLE 6.—PRODUCTIVITY IN THE FLOUR-MILLING INDUSTRY

[On basis of output of wheat flour only]

Year	Production index	Employment index	Productivity index	Year	Production index	Employment index	Productivity index
1914.....	100.0	100	100.0	1923.....	108.0	78	138.3
1919.....	114.3	110	103.9	1924.....	113.9	74	154.0
1921.....	104.1	77	134.8	1925.....	107.5	71	152.3
1922.....	107.9	78	138.2				

Since 1923 is the last year for which there are complete figures in the first index, the comparison is best made with that year, though it will be noted that the second productivity index exceeds the first in every year. In 1923 the second exceeds the first by more than 12 points, and in 1921 by nearly 15 points. This excess is partly due to the fact that Russell's figures for wheat-flour production are larger than those of the census, and partly to the fact that the first index is influenced downward by the inclusion of corn meal, bran, and feed, which have not increased in proportion to wheat flour. All things considered, the first index is probably the better for the industry as a whole, and the net increase in productivity since 1914 has been about 39 per cent.

Cane-Sugar Refining

Index of Production

STATISTICS on cane-sugar production can be found in the Census of Manufactures, and also in the Survey of Current Business, issue of February, 1926 (p. 88), which publishes the original figures of Willett and Gray as reported in the Statistical Sugar Trade Journal. The census covers both the raw sugar, which is melted down for refining, and the refined sugar produced; while Willett and Gray's figures are for meltings only. This is an industry in which there is a single basic raw material, uniform in quality; while the products are quite diversified. It is impossible, in the present state of statistical reports, to do anything in the way of making an adequate index of the output in products. Quite a large percentage of the workmen in a refining plant are engaged in the production of cube, pressed or wrapped sugar, and other specialties which can not be adequately accounted for in estimating the final total product. It also happens that there is something wrong with the census figures for refined sugar in 1919; at least the amount given is about 500,000 tons too low in relation to the raw sugar which was melted that year. There are three sources of data on the amount of raw sugar meltings in 1919—the census, Willett and Gray, and the United States Sugar Equalization Board.² All three are in close agreement as to the amount of raw sugar melted, but the census figures for refined sugar are far out of line. For these and other reasons, it seems better to construct an index of production from the amount of raw material used in each year. The census figures for 1914 were used as the

² See Bernhardt, Joshua: Government Control of the Sugar Industry in the United States, p. 251. New York, The Macmillan Co., 1920.

base, while Willett and Gray's figures were used for the period 1919 to 1925. There is close agreement between the two sets in every census year, including 1925, so either one would do, but Willett and Gray's have the advantage of covering the intercensal years.

Index of Employment

The same procedure was followed here as in the case of the other industries. The number of men employed numbered about 12,500 in 1914, nearly 21,000 in 1919, and fluctuated between 17,000 and 18,000 in 1921 and 1923 to 1925. There are no figures for 1922, which was a big production year. The average full-time weekly hours are found to be $61\frac{1}{2}$ in 1924, $58\frac{1}{4}$ in 1919, $59\frac{1}{2}$ in 1921, and 57 in 1923; but there is considerable doubt concerning the significance of these figures because such a large percentage of the workers worked more than 60 hours per week. Also, since some of the processes in this industry are continuous, the men are partly grouped in 8 or 12 hour shifts and partly on a regular day shift of 9 or 10 hours. Taken altogether, the data on hours may contain quite a few errors.

Index of Productivity

The changing productivity of labor in this industry is shown in the table below.

TABLE 7.—PRODUCTIVITY OF LABOR IN CANE-SUGAR REFINING

Year	Production index	Employment index	Productivity index	Year	Production index	Employment index	Productivity index
1914	100.0	100.0	100.0	1923	130.5	129.2	101.0
1919	123.3	157.9	78.1	1924	143.0	126.5	113.1
1921	111.3	137.0	81.6	1925	160.8	126.3	127.3

The above figures are probably not very reliable, but they represent the best that can be done at present, and are therefore given for what they are worth—namely, as a means of making a rough comparison between 1914 and 1925. For this the index is probably sufficiently accurate to mean something. The indexes for 1919 and 1921 seem to be too far out of line to mean much, but this may not be due to any inaccuracy at all. In fact, it is altogether likely that the somewhat freakish aspect of the whole productivity index may be due to the nature of the sugar-refining industry.

This is an industry in which the basic processes are very highly chemical and mechanical, with comparatively little labor involved. However, since the war there has been a great development of specialties such as pressed and wrapped table sugar, the production of which involves a large amount of labor that was not necessary when nearly the whole product was disposed of as ordinary granulated sugar. The tendency in recent years has been for sugar refineries to multiply the kinds of manufactured sugar and the sizes of containers. All this results in the employment of a large labor force not directly concerned with the refining, but which is charged up against the industry and reduces the productivity index. The marked improve-

ment in the last two years is probably due to the fact that this side line has become a factor of such importance that attention is being directed toward improving the productivity of this class of labor by the introduction of machinery, rerouting of materials, etc.

Another factor to be taken into consideration is the fact that in the refining processes proper equipment is much more important than men; that is, production can be expanded enormously (up to the full capacity of the equipment) without the addition of a proportionate amount of labor, and, on the other hand, a curtailment of output does not reduce the labor force much. Sugar refining is not the only industry in which this is the case, but it is affected in a much greater degree than most. Thus the amount of sugar refined increased from 112 in 1921 to 161 in 1925 with a practically stationary labor force, but this was not due to any marked improvements in machinery or to any increase in refining plants. Existing plants were simply working nearer to capacity.

Lastly, in taking notice of the situation in 1919, attention must be called to the fact that this was a year of extreme shortage, high prices, and Government regulation. The United States Sugar Equalization Board was still operating and the available raw sugar was being apportioned among refiners in accordance with the original agreement in 1918. These chaotic and uncertain conditions naturally resulted in a great increase in clerical workers as well as wage earners; each plant would keep all the men it considered necessary to run at full speed, while the actual delivery of raw sugar to be refined might be much below the capacity of the plant. It should also be noted that turnover in 1919 must have been exceedingly high, and the refineries would keep an extra force on hand to guard against being short-handed when shipments of sugar arrived. All these things combined resulted in a very high employment index for that year, although the output of sugar was not exceptionally large; hence, the statistics are hardly comparable with those of other years.

In summary, it should be emphasized again that the index of productivity is open to considerable doubt. Due to the nature of the industry, the chaotic conditions in 1918 to 1920, and the recent tendencies in marketing, an index of productivity, however accurate, would not be so significant as the indexes for the other industries covered in this article.

Productivity of a New England Cotton Mill, 1838 to 1925

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THE movement to eliminate waste and put production on a scientific basis is the most striking development in American industry since the World War. This movement has taken a twofold direction—the perfecting of industrial technique and the harmonizing of labor relations. Methods of production have been improved by the perfection of machinery, careful routing of the product through the plant, standardization of the product, and experimentation with the raw material and the various processes

in its manufacture. Labor relations have been stabilized, and the cooperation of the workers in efficiency production programs has been secured chiefly through the works councils¹ and agreement with trade-unions.² The investigation covered by this report was undertaken to measure the increased productivity in the cotton industry resulting from this general trend.

A long-established New England mill producing staple goods was selected and a study was made of its production record before and after the war. This mill has taken the lead in the industry in introducing scientific methods of production in its plant, and hence does not represent conditions typical of the industry as a whole. Nevertheless, the results show what is being accomplished where attention is given to improving the industrial technique.

The efficiency program in this mill has been developed along one line only, that of efficiency engineering. No attempt has been made to secure the cooperation of the workers in this program except to pay them wages which will keep them contented. There is no company union or works council, and the workers are unorganized.

Problems Involved in Calculating an Index of Production in the Cotton Industry

THE per capita production of any industry for a given period can be calculated by dividing the total output by the total employment for that period. The method is simple and easy of execution in industries where the product is sufficiently homogeneous to be expressed in terms of a standard unit, but this does not hold true of the cotton-goods industry. The products of this industry vary considerably not only in texture and weight but in conditions of manufacture, so that it is impossible to combine them and derive from such a heterogeneous quantity anything like a significant index of production. This difficulty might be overcome, in a type study such as this, if a mill could be found devoted over a period of years exclusively to the manufacture of a single quality of cloth, but such a mill probably does not exist. Most mills have very flexible programs of production which allow the introduction of a variety of different grades and qualities of fabric. There are, of course, mills producing a single class of goods, such as gingham or sheetings, but usually several styles of such goods are made, and their organization will differ sufficiently to make it impossible to combine the output of each style for the purpose of measuring the total product unless some method of weighting is applied. The output of the mill under consideration consisted of flannels and sheetings of a large variety of styles. Many perplexities arose in the measurement of this heterogeneous product which resolved the study into one on methodology of measuring efficiency as well as the measurement of efficiency itself.

Measurement of the Output

Several methods suggest themselves for measuring the output of a cotton mill. A rough index of production can be secured by taking the total pounds of cloth produced and dividing it by the total hours

¹ Works councils increased in number from 225 in 1919 to 814 in 1925. (See National Industrial Conference Board, special report No. 32: The growth of works councils in the United States. New York, 1925.)

² Such agreements are in operation in the garment and machine trades, but notably on the Baltimore & Ohio Railroad, where the experiment has been highly successful. The Baltimore & Ohio plan has recently been adopted by the Canadian National Railways and is being studied in other industries with a view to its adoption.

of employment. Such indices have been used, but they are only crude measures of production because they fail to make allowance for the extent to which the output is influenced by varying qualities of the product. Thus, a coarse cloth like flannel will have fewer yards to the pound than a fine cloth like lawn, and the same unit of measurement can not be applied to the two fabrics. Moreover, indices showing variations between two or more periods will be misleading if there have been variations in the proportions of coarse and fine cloth produced.

The output of cotton cloth is usually recorded in linear yards, as well as in pounds, or, if not, pounds can be easily converted into yards, but the yard as a standard of measure is as unsatisfactory as the pound, and for the same reason. In manufacture the coarser fabrics mount up faster in yards than do the finer ones, and the same is true of loosely woven fabrics; hence, where two qualities of goods which differ very much are lumped together, the yard is not a satisfactory unit of measure. The linear yard, furthermore, does not accurately measure the output where the width of the cloth varies, as it does, anywhere from 18 to 60 inches and more. The output could, of course, be reduced to square yards, but that would still not allow for the weight of the cloth due either to the varying number of picks to the inch or the different qualities of yarn used.

Another alternative which suggests itself is to find a common denominator or "conversion figure" by which the whole product could be stated in terms of a standard unit. Thus, the equivalent, in other qualities of cloth, of a pound or yard of sheeting of a given width and weight might be calculated. But this would be impracticable where the output consisted of a large number of different grades or styles, because it would be necessary to calculate a conversion figure for each grade. Among the factors entering into such a calculation would be the number of the yarn used, both weft and warp, the number of warp ends, the number of picks to the inch, the width of the reed, etc.—and all of these differ more or less in different grades of cloth. Even where the construction of the cloth is identical, there may be a difference in its weight as it comes from the loom due to variations in the yarn which is not always of a uniform weight, however closely it may be watched and regulated in the spinning. Moreover, the relative efficiency with which different grades can be manufactured would have to be taken into account in the calculation of such a figure, and this would introduce added difficulties. Of course, all of these are fine points, but they must be considered if the output is to be measured with scientific accuracy. This is especially so in an intensive study of the efficiency of a single mill where such seemingly minor differences influence the results.

Still another way, the one used in this study, is to take, as the measure of output, the picks³ produced. The organization records showed for each grade of cloth manufactured the number of picks to the yard, and this figure, multiplied by the yards produced, gives the output in picks. The whole product thus reduced to picks may then be thrown back again into yards or pounds on the basis of some arbitrary or statistical unit, and this figure divided by the total

³ Picks are the filling threads or "weft" which are interlaced by means of a shuttle with the threads held parallel in the loom (known as the warp yarns or the chain) to form the fabric.

employment will give the index of production. Although more accurate than yards or pounds for measuring the output, it can readily be seen that when picks are used as a standard of measure, no allowance is made for the weight and number of warp threads. In some fabrics the weight of the warp yarns will not vary perceptibly from that of the filling yarns, and where this is so, no great discrepancy arises from taking only one dimension in considering the weight of the fabric. The number of warp ends, which, combined with the width of the reed, determine the width of the fabric, can be allowed for by using square yards instead of linear yards for the total output when multiplying the yards produced by the number of picks to the yard.

All of these methods, however, aim merely to allow for the differences in the texture and weight of the finished cloth. None of them makes allowance for differences in the condition of manufacture which obtain in its production and which may influence the efficiency with which different grades of cloth can be made. An index of production which fails to make allowance for such differences is but a crude measure of production, however refined the method used in measuring the actual physical output. In the mill under consideration, for example, the manufacture of flannels can not be made as efficient as that of sheetings because of the nature of the former. The yarn used in the manufacture of flannels, practically a roving, makes it necessary to replenish the shuttle much more frequently than is necessary in the manufacture of sheetings, and therefore necessitates the employment of a larger number of workers on the looms. On some of the very wide flannels, for instance, one weaver tends as few as 4 looms, while on sheetings each weaver tends 32 looms. In the calculation of man-hour production for the entire mill, this difference in the number of operatives per loom in the weave shed is obscured by conditions prevailing in the carding room. The coarse yarn used for flannels does not need to go through as many finishing processes as does that used for sheetings; hence, the increased number of workers in the weave room is offset, to some extent, by fewer workers in the finishing processes. Nevertheless, it is obvious that an index based on a combination of the output of these two fabrics which does not make due allowance for such differences can not be wholly accurate. Again, perceptible differences in efficiency may be present not only in the manufacture of two different grades of cloth but even in the manufacture of the same grade if the width of the cloth varies considerably, because a loom on which a very wide fabric is woven must be geared at a lower rate of speed than one on which a narrow fabric is made.

No attempt was made in the present study to allow for relative efficiency in producing flannels and sheetings in the years when the two were combined, because no easy way was seen for doing it, and time and means forbade making a more intensive study.

Calculation of Total Employment

The other factor in the calculation of an index of production is the total employment, i. e., the man-hours worked during the period studied. Where records are kept of total number of hours worked each day by each employee, whether on piece or time rates, it is a simple matter to calculate the man-hours. In the cotton industry,

however, most of the employees work at piece rates, and records are not always kept of the number of hours actually worked by such employees; these hours must, then, be estimated. The mill-hours multiplied by the total number on the pay roll, give roughly the total hours worked. Of course this is a padded figure and higher than the actual man-hours worked. A more accurate estimate of man-hours could be obtained by taking the average number of workers on the pay roll over the period studied and multiplying it by the mill-hours for that period. Some mills keep records of the total number of full-time workers for given periods for purposes of estimating labor cost, and where such records are available, it is possible to obtain actual man-hours by multiplying the number of full-time workers by the mill-hours for such periods.

Care must be taken, in calculating man-hours, to separate the wage earners from the employees who participate in management, or the white-collar workers. In a cotton mill these are the overseers and second hands.

The question arose, during this investigation, whether all of the wage earners in the mill should be included in the calculation of man-hours, or only those who were directly employed on the stock in process. The personnel of the mill is divided into groups doing the following: Opening and picking, carding; spinning, dressing, weaving, cloth, repairing, and yard work. There is no question about the workers in the first five groups, but the procedure is not so clear as to the last three. The work in the cloth room consists of napping and brushing (flannels), inspecting, folding, weighing, stamping, and baling the cloth—steps in finishing and preparing it for shipping. Most of this work is done after the cloth has gone through the bleachery where it is not only bleached but shrunk or stretched, thus making the output of the cloth room in pounds or yards quite a different quantity from that of the weave room. If the output used in these calculations had been the output as it came from the cloth room, it would have been necessary to include the cloth-room employees, but the output taken was that of the weave room, which was considered more representative of the true output of the mill. The cloth-room workers, therefore, were not included in the total employment. The repair shop includes such workers as machinists, carpenters, painters, engineers, and firemen.⁴ These workers are not engaged on the stock in process and therefore do not contribute directly to the added productivity of the mill although they may and do directly influence the cost of production; many repairs, formerly done outside, for instance, are now done in the mill and this materially lowers production costs. The same is true of the yardmen, among whom are such workers as teamsters, watchmen, waste men, and other common laborers. After consideration it was decided not to include these two groups of workers. The important thing is not whether all or only a part of the workers should be included, but that those workers be selected who furnish the most representative index of productivity.

⁴ It does not include loom fixers whose earnings depend upon the productivity of the looms and who are, therefore, included in the weaving group.

History and Description of Mill Selected for Study

THE mill selected for this study was built in 1813, and until 1890 devoted itself exclusively to the manufacture of a standard grade of sheetings.⁵ In that year the manufacture of flannels was introduced, and in 1910 formed 82.7 per cent of the total output. Since that time the output of flannels has decreased, and in 1919 formed only 25.9 per cent of the total. In 1920 a new mill was erected, equipped with the latest improved machinery and a complete conveyor system for distributing the stock in process from the time it leaves the storehouse in bales until it arrives in the cloth room as cloth. This new mill was turned over exclusively to the manufacture of sheetings and pillow tubings, and the manufacture of flannels remained in the old mill.

Much thought and attention have been given to putting production in this new mill on a highly scientific basis, and careful studies are constantly made for the purpose of detecting and checking all possible waste and maintaining production and efficiency at a maximum. An excellent opportunity is thus afforded for making comparisons of the productivity of the new and scientifically equipped and operated sheeting mill with the old mill operating with old machinery and under less advantageous conditions.

An opportunity is afforded, further, to make a 50-year comparison of efficiency in production of the same grade of cloth, without the disturbing factor of flannels, the new mill being devoted exclusively, in 1925, to the manufacture of sheetings of practically the same grade as those produced in 1876.

Years Selected for Comparisons and Reasons Therefor

IN 1876 and again in 1910 the management of this mill made calculations of man-hour production on the basis of pounds for the years 1838, 1876, 1890, and 1910, and hence these years are included in this study and where possible the figures have been checked with the records in order to make sure that they were comparable with the additional data secured. The production records of this mill since 1838 were available, but the pay-roll records prior to 1910 have been destroyed and only short summaries kept of the total full-time employees and the number of hours the mill ran. For the year 1850 the first reliable wage statistics were available; hence this year was added.⁶ The year 1919 was taken, first, because it was a year with production at a maximum, and second, because it was the last year before the new mill was opened and thus afforded an opportunity to compare production before the introduction of efficiency methods. In 1925 the flannel and sheeting mills were separated, and this year likewise brings the data down to date.

⁵ The term "sheeting" is applied, in the trade, not only to sheetings suitable for beds but to a large variety of plain woven cotton goods used for domestic and commercial purposes. This term is so used throughout this paper.

⁶ It was not possible to present labor costs of production in this article. However, average wages for the years 1850, 1910, 1919, and 1925, are given in Table 6.

Eighty-eight Year Comparisons of Cotton Cloth Production

SINCE this study is one of methods of measuring efficiency as well as a study of efficiency itself, it is interesting to note (Table 1) the differences in production indices worked out by the various methods discussed above. The man-hour production was calculated both by straight pounds and by pounds derived by first reducing the whole product to picks and then reconverting the picks into pounds, a standard grade of sheeting produced in this mill being used as a unit.⁷

TABLE 1.—MAN-HOUR PRODUCTION OF COTTON CLOTH IN A NEW ENGLAND COTTON MILL, IN POUNDS AND PICKS, 1838 TO 1925

Unit of measurement	Units of cloth produced per man-hour						
	1838	1850	1876	1890	1910	1919	1925
Straight pounds ¹	0.98	1.21	2.24	3.31	5.00	4.98	7.53 (sheeting). 8.94 (flannel). 7.83 (both).
Pounds based on "D" grade:							
Product reduced to picks.....			2.28	3.20	3.18	3.84	8.12 (sheeting). 4.36 (flannel).
Product reduced to 36-inch picks.....							8.31 (sheeting). 4.04 (flannel).

¹ The proportions that flannels formed of the total product in the years when flannels and sheetings were combined, were as follows: 1890, 5.9 per cent; 1910, 82.7 per cent; 1919, 25.9 per cent; and 1925, 24 per cent.

On the basis of straight pounds, production in this mill increased between 1838 and 1925 from 0.98 pound per man-hour to 7.53 pounds in the sheeting mill and to 8.94 pounds per man-hour in the flannel mill. The flannel mill would thus seem, at first sight, to be more efficient than the sheeting mill. The discrepancy comes, of course, because of the fact that flannels, with fewer yards to the pound than the sheetings, give a false index of productivity—a much higher one than is justified in comparison with the production of sheetings. This is seen when the output is calculated in pounds on the basis of picks. By this method the man-hour production of cloth shows an increase between 1876⁸ and 1925 from 2.28 pounds to 8.12 pounds in the sheeting mill and 4.36 pounds in the flannel mill. The flannel mill is then shown to be about one-half as productive as the sheeting mill. The distortion in the man-hour output calculated on the basis of straight pounds is evident, likewise, in comparisons of other years in which flannels formed a portion of the total product.

It should be pointed out, in making comparisons between the sheeting and flannel mills, that the relative efficiency with which the two qualities of cloth produced in these mills can be manufactured differs to some extent, and, since no allowance for such differences has been made in this calculation, these figures are not strictly comparable. The lesser showing for the flannel mill, for instance,

⁷ The quality of cloth chosen for calculating a unit of output was Grade "D" a 40-inch sheeting having 47 picks to the inch. It was selected because it is now the grade of which the largest quantity is produced and is used by this mill for calculating labor cost.

⁸ Organization records of cloth produced were not available for 1838 and 1850, and hence picks could not be calculated for these years.

can not be ascribed wholly to such causes as the use of old equipment or inefficient methods. The fact that the manufacture of flannel can not be made so efficient as that of sheeting accounts in some measure for its lower figure. This would seem to be borne out by a comparison of man-hour production for the years 1890 and 1910. In the latter year 82.7 per cent of the output consisted of flannels and the man-hour output for that year fell slightly below that for 1890, notwithstanding the fact that during the years between 1890 and 1910 new Draper looms were installed in this mill and should have contributed toward a marked increase in production. On the other hand, since the erection of the new mill, radical changes have been made in the production of flannel and several stages in its manufacture, found on experimentation with the raw product to be unnecessary, have been eliminated. This has somewhat increased the efficiency rate for flannel for 1925, and the amount of error in this comparison is probably not so great as might appear at first sight.

TABLE 2.—MAN-HOUR PRODUCTION OF COTTON CLOTH IN A NEW ENGLAND COTTON MILL, SHOWING PERCENTAGE INCREASES, 1850 TO 1925

Item	1850	1876	1890	1910	1919	1925
Pounds produced per man-hour.....	1.21	2.28	3.20	3.18	3.34	8.12 (sheeting). 4.36 (flannel).
Per cent of increase.....		88	40		21	111 (sheeting). 14 (flannel).

As Table 2 shows, comparisons between years when flannel formed varying proportions of the total output should likewise be made with caution. The man-hour production in the sheeting mill for 1925 would seem to show an increase over that for 1919 of 111 per cent. But in 1919, 25.9 per cent of the output was flannel with a lower efficiency rate of manufacture than holds true for sheeting; hence, the figure for 1925 appears higher in comparison than probably is justifiable. On the other hand, the 14 per cent increase for flannel in 1925 probably is not so high as it should be because it is based on an output (in 1919) which consisted of 75 per cent sheeting, with a higher rate of efficiency.

For the year 1925 calculations were further made of man-hour production in picks which allowed for the width of the cloth (Table 1). This was done by multiplying the number of picks to the yard by the square yards instead of the linear yards produced. The results show a slightly better figure for the sheeting mill and a less favorable one for the flannel mill. This is explained by the fact that a large proportion of the output of the sheeting mill was above 40 inches wide while most of that of the flannel mill was below this width. The difference was not considered large enough to make desirable such calculations for the other years included in this study.

Causes of Increased Production

COMING to the rate of increase in the productivity of the mill from period to period, it is seen that the largest increases have been between 1850 and 1876 and between 1919 and 1925, the per cent of increase in 1876 over 1850 being 88 per cent and that in 1925 over

1919 being 111 per cent (in the sheeting mill). The first period covers a span of a quarter of a century which saw the introduction of many technical improvements in the industry, some of which were utilized in the mill under consideration. Thus, in 1855 there were installed 134 new looms; in the seventies the first stop motions were placed on the looms, making it possible for one operative to tend more looms; beginning with 1874 the whole system of spinning began to be changed from throstle to ring spinning. The percentage increase for the second period mentioned is the more remarkable, however, not only because it is much higher but because it covers a duration of only six years. The man-hour productivity of the new sheeting mill in 1925 is more than twice as great as that of the old mill in 1919. Several factors account for this phenomenal record. First, there is the physical layout of the mill. When the new mill was built, plans were made for the most efficient routing of the product through the plant. The exact number of workers this arrangement has eliminated can only be estimated because the new mill has been working under the present arrangement from the start, but changes in a single department suffice to illustrate this point. In the old mill the carding machines and drawing frames were placed at opposite ends of the mill, and the sliver as it came from the cards had to be carried to the drawing frames. There were, on an average, about 10 "coiler boys" for this work. In the new mill the carding machines are placed next to the drawing frames, and now the card men, when the cans are full, simply shift them across the aisle at small expense of time and effort, and coiler boys are no longer needed. Another occupation which has disappeared completely in the carding room with the building of the new mill is that of the stripper. A stripper's work consisted in cleaning the cards; now this is done by a vacuum system installed in the new mill, the card men finishing what the vacuum does not reach. This additional work for the card men is offset somewhat by their having to tend fewer cards than formerly. A second factor accounting for this increase in production is the conveyor system already mentioned. The number of employees this has eliminated has been variously estimated, but there is no doubt that it is a large contributory factor in increasing the efficiency of the mill. A third factor is the installation of new and improved machinery, which has done away with the employment of many workers. The Barber-Colman machine for tying ends, for example, has cut down the number of drawing-in hands from an average of about 19 to 5.

The new Draper looms have made it possible for one operative to tend more looms than formerly and thus materially to decrease the number of workers in the weave shed. Still another factor has been the elimination already mentioned of certain unnecessary processes. There is in this mill a blower and automatic distributor system. Careful thought given to the mixing of cotton in the preliminary processes has made it possible to decrease the number of doublings in the finishing processes. But the single factor which has made the greatest contribution has been the introduction of the multiple loom and frame system. There is a tendency in the industry at present to redistribute the work of the skilled operatives among semiskilled or unskilled workers, subdividing it in such a way that it is possible for a single operative to tend a constantly increasing

number of machines. Formerly, one operative tended on an average about 16 looms. It was part of the work of the weaver to thread his shuttles, clean his loom, and remove the roll of cloth from the loom. At present a single weaver tends 32 looms in this mill, but he devotes himself entirely to piecing broken ends and watching the cloth. The shuttles are threaded for him by a battery girl or weaver's helper; his looms are cleaned, and the cloth is removed by workmen especially assigned to these tasks. The same principle is in operation in the spinning room. Formerly, it was part of the spinner's job not only to piece ends but to clean the lint and dust that accumulates continually on the upper parts of the spinning frames when it is running, and in some instances even to doff the frame when the bobbins were full. A spinner could take care of 4 frames, or 8 sides. Now an operative in this mill tends as many as 9 frames, or 18 sides, but she devotes her entire time to piecing ends. Her frames are cleaned and doffed by cleaners and doffers. A comparison of the personnel of the weave shed in this mill in the years 1910 and 1925, shown in Table 3, will give an idea of the way the labor in this department has been subdivided and redistributed.

TABLE 3.—COMPARISON OF THE PERSONNEL IN THE WEAVE SHED OF A NEW ENGLAND COTTON MILL, 1910 AND 1925

Item	1910	1925 ¹
Average number of workers.....	21 section hands ² 17 filling hands..... 3 scrubbers..... 302 weavers.....	17 loom fixers. 1 spare loom fixer. 2 loom fixer learners. 7 warp changers. 1 warp placer. 7 loom cleaners. 1 lease inspector. 1 lease collector and offer. 7 cloth men. 2 supply-room men. 1 motorman. 3 bobbin men. 1 yarn man. 5 blowers and sweepers. 5 spare hands. 47 weavers' helpers. 66 weavers.
Total.....	343	174
Per cent of total working force in mill.....	43	38

¹Weave shed of sheeting mill only, but including night force in this department.

²The section hands, or loom fixers, formerly did a large share of the work about the looms now assigned to such workers as warp changers, warp placers, lease collectors, etc.

It is seen that although the number of weavers has been materially decreased, new occupations have been created which take up this decrease somewhat; nevertheless, the total personnel of the weave room has decreased from 43 per cent to 38 per cent of the total working force of the mill.³ It should be noted, in making this comparison, however, that there has been a reduction of workers in each department since 1910, which makes the percentage reduction in the weave room in 1925 in comparison with 1910 seem less favorable than it would otherwise have been. Some idea may be gained of the marked absolute decrease in the total number of workers by com-

³The real saving in this subdivision of labor has come, of course, in the reduction of production costs, the unskilled workers being paid at a much lower rate. In the week when the multiple-loom system was introduced in this mill, there was a saving of over \$1,000 in wages in the weave shed alone.

paring the average number of workers employed in 1910, 1919, and 1925 and the output in these years. Reference to Table 4 shows, for example, that with an average number of workers 36 per cent lower in 1925 than in 1919, the output has increased 20 per cent over that in 1919.

TABLE 4.—COMPARISON OF TOTAL NUMBER OF WORKERS AND TOTAL OUTPUT IN A NEW ENGLAND COTTON MILL, 1910, 1919, AND 1925

Item	1910	1919	1925	Per cent increase (+) or decrease (-), 1925 as compared with 1919
Total average number of workers.....	800	718	1 463	-35.5
Output in pounds, based on picks.....	7,338,905	6,814,561	8,173,957	+19.9
Output in straight pounds ¹	11,513,674	8,796,875	7,579,885	-----

¹ Sheetting mill only.

² In comparing the output in straight pounds, it should be borne in mind that 82.7 per cent of the total output in 1910 and 25.9 per cent in 1919 represented flannels with fewer yards to the pound than sheetings but with a lower efficiency rate of production.

TABLE 5.—COMPARISON DURING EIGHTY-EIGHT YEARS OF FACTORS ENTERING INTO THE PRODUCTION OF COTTON CLOTH, IN A NEW ENGLAND MILL¹

Item	1838	1876	1890	1910	1925
Number of spindles.....	12,000	23,888	40,668	55,491	65,688
Number of looms.....	400	786	1,354	1,564	1,726
Average number of yarn.....	13.25	13.25	13.00	9.01	-----
Yards per pound ²	2.95	2.93	2.89	1.93	2.58
Cost of cloth per pound:					
Labor.....cents.....	4.81	3.59	2.90	2.64	6.65
General expenses.....do.....	2.14	2.61	2.97	-----	6.35
Cotton, at the mill ³.....do.....	12.73	14.13	10.67	-----	28.28
Percentage of waste, net.....	12.91	12.11	10.95	-----	11.08
Total, per pound.....cents.....	21.99	22.29	17.81	-----	41.27
Total, per yard.....do.....	6.64	7.60	6.15	-----	16.00
Output of cloth in six months:					
Yards.....	2,832,575	4,737,681	9,259,136	11,792,159	25,771,087
Pounds.....	960,195	1,615,791	3,210,554	5,584,681	9,987,153
Average price per yard received for sales.....cents.....	8.50	8.55	6.45	-----	-----
Profit per yard, net.....do.....	1.86	.95	.30	-----	-----
Output in one hour:					
Pounds per spindle.....	.042	.041	.052	.073	.076
Pounds per loom.....	1.264	1.241	1.565	2.59	2.01
Yards woven per loom per day of 11 hours.....	41.03	39.14	49.5	54.9	57.04
Hours of labor per week.....	74	64 $\frac{3}{4}$	60	58	54
Number of operatives per loom ⁴	1.29	.55	.48	.53	.31
Number of operatives employed.....	514.62	435.04	650.13	825.27	-----
Mill hours for six months.....	1,898.84	1,655.07	1,491.25	1,421	-----
Total man-hours worked.....	977,181	720,021	969,506	1,172,709	1,274,965
Cloth produced per man-hour ⁵.....pounds.....	.98	2.24	3.31	4.76	7.83
Average wages per operative:					
Per week.....dollars.....	-----	5.13	5.56	7.41	25.61
Per hour.....do.....	-----	.08	.09	.13	.47

¹ The data in this table for 1838 and 1876 were first published in the Proceedings of the New England Cotton Manufacturers Association, No. 21, October 25, 1876, pp. 6-18; and were republished, with slight modifications, in the American Wool and Cotton Reporter, May 25, 1911, p. 25, and data for the years 1890 and 1910 added. During the present investigation these figures were checked as far as the records of the mill studied were available, and additional data obtained for the year 1925.

² The product of this mill for 1838 and 1876 was similar and comparable. In 1890 flannels were introduced and formed 5.9 per cent of the total output for that year, 82.7 per cent of the output for 1910, and 24 per cent of the output for 1925.

³ Figure for 1925 represents cost of cotton actually used in goods during that year; figures for the other years represent cost of cotton purchased during year.

⁴ Figure for 1925 includes workers in cloth room, repair shop, and yard. It was impossible to determine whether these workers were included in figures for previous years or whether the figures for these years were based on the "mill" workers only, that is, the workers on the stock in process.

⁵ These figures are not all comparable; see footnote 2.

TABLE 6.—AVERAGE HOURLY RATES IN A NEW ENGLAND COTTON MILL, BY DEPARTMENTS, 1850, 1910, 1919, AND 1925

Department	Average wages, hourly rate ¹			
	1850	1910	1919	1925
Carding.....	\$0. 02	\$0. 12	\$0. 35	{ \$0. 46 (sheeting) . 47 (flannel)
Spinning.....	. 02	. 11	. 32	{ . 40 (sheeting) . 45 (flannel)
Dressing.....	. 03	. 13	. 34	{ . 47 (sheeting) ² . 51 (sheeting)
Weaving.....	. 03	. 13	. 36	{ ³ . 60 (sheeting) . 45 (flannel)
Average, mill.....	. 03	. 12	. 35	{ . 48 (sheeting) . 46 (flannel) . 47 (both)
Cloth room.....		. 14	. 36	. 41
Repair shop.....		. 21	. 51	. 59
Yard.....		. 14	. 40	. 45
Electrical.....				. 63
Heating and humidifying.....				. 55
Storeroom.....				. 55
Average, entire plant.....		. 13	. 36	. 47

¹ Derived by dividing the total pay roll by total hours worked.² Day force.³ Night force.

Conclusion

SINCE many of the problems and difficulties which arose in the measurement of the efficiency of the mill selected as a type study for this investigation have not been solved because of the limits and scope of the present study, the results submitted are not an exact measure of the efficiency of this mill. They do show roughly, however, the increased productivity following the introduction of scientific methods and point to the possibilities of technical reforms in the industry. So far, such reforms in the cotton industry have been instituted almost wholly without the cooperation of the workers and often in spite of their active opposition. When the cooperation of the workers is enlisted in efficiency production programs, which bids fair to come to pass, judging from the change in attitude of labor leaders toward scientific management within the last two or three years, the increase in productivity will, no doubt, surpass even the phenomenal record which this study would seem to indicate to be the achievement of this mill.

Displacement of Dock Labor by Power Trucks ¹

THE reduction of operating costs at marine terminals depends to a great extent upon the elimination of unessential hand labor. This fact has lead to the devising of efficient equipment and methods which are being used with striking success by a number of concerns at various ports throughout this country.

Around New York, where wages are high and there is such a constant and tremendous demand for speed, notable decreases have been made in the expense of handling operations through the adoption of

¹ Pacific Marine Review, San Francisco, August, 1926, p. 366: "Cutting costs at terminals," by Harold J. Payne.

power equipment. Electric industrial trucks and tractors have been largely responsible in effecting these economies; no less than 45 concerns operating one or more New York piers are using such equipment with profit.

Four years ago the dock superintendent of the Holland-American Line felt convinced that some new means must be worked out to meet the ever-increasing cost of handling freight at that company's pier. Electrical industrial trucks seemed at that time a somewhat remote solution of the problem on account of the enormous congestion on the dock. It was also feared that the installation of such trucks would excite the hostility of the stevedores and lead to costly tie-ups. Moreover, the question of initial expenditure for the new equipment was a serious one.

After further study of the situation, a single machine of the straight platform type was introduced by way of an experiment. This truck was not only able to go wherever the hand trucks could but it carried four to five times as much and was from six to twelve times faster.

The purchase of 5 more trucks was soon decided upon and within 12 months 20 were in operation.

Formerly it was the custom to use 16 men to work two bulkheads. Now, instead, five trucks with drivers, but with no helpers, do the same work. The average daily figure for the operation of each truck is \$2.68, including all items. At present about 12,000 tons of freight is being handled each week over the pier which the power trucks are working; although in case of heavier traffic as much as 20,000 tons can be handled. The trucks are frequently in service for 13 hours a day, being given a boost during the noon hour to insure satisfactory performance.

These trucks, being regularly and thoroughly inspected and having their batteries carefully charged, are always in first-class working order. The expense of such overhauling is included in the operation cost of \$2.68 per day, the net daily charge against each truck averaging barely 50 per cent of the wages of one stevedore.

When power trucks of this character have been introduced, many uses have been found for them that were not foreseen previous to the purchase of such equipment. Recently, for example, a great number of automobiles in crates have been moved by means of these trucks.

Formerly 10 to 15 men working hard were required to transfer such a crate a couple of hundred feet and the job was both laborious and slow, sometimes requiring twenty minutes or half an hour. Now such an operation requires only a few minutes' time of one man and no physical effort on his part whatever. This allows the same speed to be maintained late in the day as the start—a distinct advantage impossible of realization when the work is done entirely with man power unassisted by mechanical means.

When block and tackle are rigged above the dock for special hoisting jobs the electric trucks are now used eliminating the work of a gang of men on the rope.

Increased Output of Coal per Man in Nova Scotia ¹

THE Canadian Mining Journal contains in its issue of June 18 an article by Mr. Walter Herd on the "Output of coal per man in Nova Scotia." The average output per shift for all employees of the Dominion Coal Co., he says, increased from 2.06

¹ Canada. Department of Labor. Labor Gazette, Ottawa, July, 1926.

in 1919 to 2.53 tons last year, or 20 per cent. In the other constituent companies of the British Empire Steel Corporation, the increase in production per man per shift was slightly more pronounced. Based on the number of underground producers, the rate of production was 6.85 tons per shift in 1925, an increase of 14 per cent as compared with 1919, and 9 per cent above 1922. "It may be interesting to note," the writer continues, "that in 1914, prior to the war, the output per shift per underground producer was 6.4 tons. To-day this output is increased by 7 per cent in spite of the fact that an 8-hour shift is now worked as compared to a 10-hour shift in 1914. In other words, the miner has been given such increased facilities that he can now produce more in an 8-hour shift than he previously could in a 10-hour shift."

Mr. Herd attributes the increased rate of production to the consolidation of the various coal properties in Nova Scotia in 1920 under the British Empire Steel Corporation, and to the improved mining methods that were adopted subsequently. "Since that date," he states, "year by year the physical condition of the mines has been gradually improving. Airways have been enlarged, resulting in increased ventilation, main roadways of a permanent nature have been constructed, underground mechanical haulage has been extended, reducing the number of horses necessary (in some mines horse haulage has been eliminated), miners have been provided with electric lamps, and the machinery and equipment generally has been brought to a higher state of efficiency."

Mr. Herd agrees with the Alberta Coal Commission that the lower rate of production per man as compared with that in the mines in the United States is to be accounted for mainly by the greater physical difficulties encountered in Canadian mines. "Many prominent American mining engineers," he says, "have visited Nova Scotia coal fields and several have made extended reports on the operations. Without exception they recognize that difference in the physical conditions precluded the wholesale adoption of the methods employed in West Virginia or the bituminous mines of Pennsylvania—realizing that the inclined seams being worked at considerable depth and the submarine conditions in Nova Scotia barred the possibility of the same output per employee as could be obtained from the thick, flat seams lying at little depth in the United States. Generally they found the conditions under which coal is mined in Nova Scotia somewhat comparable to the anthracite mining conditions in Pennsylvania where the output per employee is just slightly under that of Nova Scotia."

INDUSTRIAL RELATIONS AND LABOR CONDITIONS

American Bar Association Report on Advisability of Industrial Court Act for the United States

AFTER a study in the field of industrial controversies relating to or affecting interstate commerce, the committee on commerce, trade and commercial law of the American Bar Association presented a report¹ at the annual meeting of that Association at Denver, Colo., July 14-16, 1926. Some of the findings and the conclusions of this report are given below.

Some 39 bills looking to Government intervention to protect the public were introduced in Congress as a result of the recent coal strike. In the great majority of these bills it is expressly declared that the production of coal has a public interest, as it affects the general welfare of the people. The widespread suffering and enormous economic loss caused by the labor conflict, together with other occurrences of the past year, have greatly accentuated the need for a practical and legal measure for the adjustment of industrial controversies.

The committee examined the various measures taken to prevent industrial disputes. It found the Canadian industrial disputes investigation act inadequate, since, although strikes and lockouts are prohibited pending investigation and award, there is no provision for enforcing the award, which may be followed by industrial war. The unsatisfactory character of the Kansas industrial court law is also pointed out by the committee which declares that "even the United States Supreme Court in its attitude toward the Kansas industrial court, whether rightly or wrongly, was influenced by the conviction that, as a matter of public policy, ordinary business was better off without compulsory adjustment of wages or prices by an industrial court."

The Railway Labor Board from its establishment was opposed by both the carriers and the railroad employees, but the kind of industrial court provided in the Parker-Watson Act of May 20, 1926, has been approved by both organized employers and organized employees in the field of transportation. Arbitration is provided for but the parties to the dispute may themselves or with the aid of the mediation board select the members of their tribunal of arbitration. The award made by such tribunal shall be considered legally binding.

The committee calls attention to the power of the Federal Government to enact laws for the adjustment of industrial controversies which involve interstate railways and interstate carriers and industries in which controversy may lead to grave and immediate interference with interstate commerce, for example disputes affecting national labor organizations or in basic industries operating in

¹The American Bar Association. Program of the forty-ninth annual meeting to be held at Denver, Colo., July 14, 15, and 16, 1926, including committee and other reports. [Chicago?] 1926, pp. 27-48.

enormous units. A law has already been passed by Congress for the adjustment of commercial controversies and the committee holds that a similar law may be enacted for the settlement of industrial conflicts which come within jurisdiction of the Federal Government. Such a statute would, the committee believes, "furnish a great inducement to collective bargaining between capital and labor."

In analyzing the bills before the Federal Congress the committee finds that "none of them goes far enough to constitute a real solution." As to the suggested application, to industrial fields, of judicial methods of settling disputes, the committee observes that where judicial machinery has been tried out it has failed, and that if the judicial process is pressed too far the result is rebellion and war. Furthermore, when the field entered involves fundamentally economic and political problems "there is danger of a breakdown not only of the court but the Government itself." Again, the judicial process is not always suitable in particular kinds of controversies.

Some of the conclusions of the committee with reference to an industrial court for the United States are as follows:

1. That the great conflicts in industry are not so much over the details of hours, wages, or working conditions as they are over control of the industry, involving such issues as the "closed shop" or "recognition of the union."
2. That, where organizations of workers are wisely led, there is a marked tendency on the part of employers toward so-called collective agreements establishing arbitral machinery in the industry, a sort of self-government of the industry itself.
3. That, where the organization of employees is more or less communistic in its tendencies, there is strong opposition on the part of management to the attempts of the organization to gain a foothold in industry.
4. That, even in the case of organized international unions, the presence of communistic tendencies works toward a breakdown of the machinery of self-government established by both employers and workers.
5. That a relationship between unions and employers' associations based upon contracts voluntarily made is in the public interest. Encouragement can and should be given to the making and enforcement of such contracts.
6. Procedure for voluntary submission to arbitration made in advance of dispute coupled with validity of awards made by the arbitrators is in the public interest.
7. That, as the law gives sanction to contracts for the arbitration of commercial disputes, the law should, in similar manner, give sanction and enforceability to contracts for the settlement of industrial disputes.

We believe that instead of urging at this time the passage of an act for the creation of an industrial court with power of coercion, or adding to the penal statutes, the bar of the country should now give its attention to the encouragement of a movement for dealing with industrial controversy through voluntary agreement by the parties themselves, in line with the principles of the Parker-Watson Act. We are not now persuaded that setting up judicial machinery will win the confidence of sufficient numbers of people interested in the problem to make such machinery effective. Our experience with the Interstate Commerce Commission, workmen's compensation boards and other commissions, quasi-judicial in nature, indicates that commissions more in the nature of fact-finding bodies are necessary in the solution of these economic problems, and that the wiser course for the present is to let the parties interested select the personnel of such tribunals. When we dealt with the large field of commercial disputes, we were led to the conclusion that we were strengthening the law by validating the agreement made by parties at the outset to adjust their controversy in their own way. We believe the same viewpoint can be adopted with profit in the case of industrial disputes. The principles involved are similar:

- (a) The parties should be permitted freely to enter into any contracts they desire to make which are not against public policy.
- (b) Their contracts should be made valid and enforceable by law.

(c) Where they desire to avoid the friction of controversy, either in the case of commercial disputes by avoiding litigation or in the case of industrial disputes by avoiding strikes or lockouts, they should not only be permitted but encouraged to set up machinery of their own and if they have confidence in the effective workability of such machinery it will go a long way toward its success.

(d) The law should support and encourage such efforts by giving enforceability to such contracts.

We therefore conclude that the time has arrived for looking forward hopefully toward a more modern method of approach.

Relative Position of Men and Women in Government Employment

AT THE meeting of the International Woman Suffrage Alliance, held at Paris in the summer of 1926, a report¹ was presented giving the results of a questionnaire which had been sent out to the constituent societies, inquiring into any changes since 1923 in regard to the employment of women in the civil service of their respective countries. Answers were not received from all societies, but a summary of reports sent in showed that few marked changes had taken place.

Special stress had been laid upon the query whether women were employed in the same services as men, received the same salaries, and had equal opportunities for advancement. The answers showed a somewhat complicated situation. In the more advanced countries, full legal equality in regard to Government employment has been established for some time, but it was found that there is often a difference between the legal and the actual position.

Even from some of these advanced countries we have received information about difficulties in getting the laws administered equally; tradition is said still to play its part among the appointing officers. From other enfranchised countries we hear that legal equality in respect of salaries exists, but not of promotion to the higher posts; and in the unenfranchised countries there is neither equality of admission nor of salaries.

In France, Italy, and Australia, however, the answers showed that conditions were changing for the better and that there was a trend toward equality, while from India and Egypt came reports of administrative progress.

The answers to another query showed that in most of the countries reporting the large influx of women during the war period had been followed, as conditions became more normal, by their concentration in the lower grades at salaries below those paid men for similar work. "The posts as clerks in the telegraph, railways and postal services, and in other branches of the civil service are at present exclusively or almost exclusively filled by women. These posts reserved for women are generally placed in the lower degrees of the salary scale, and are in many cases rewarded below the value of the work." It is pointed out, however, that this has at least opened up a new field for the employment of women.

Another question was as to the attitude taken by Governments, as employers, toward married women. In general, it was found, marriage is not a bar to entering upon or retaining a position. Germany, Holland, and South Africa have since 1923 passed acts requiring

¹ International Woman Suffrage Alliance. Committee for like conditions of work for men and women. Preliminary report. London [1926?].

women to resign Government posts upon marriage. These laws do not, in general, apply to municipal positions, and in some cases are not applicable to educational posts. In regard to the retention of posts, there has been a rather general tendency for the Governments, as they reduced their forces from the war-time number, to begin by dismissing married women. This is regarded as being an economic rather than a sex matter.

Forced to cut down the number of employees, the authorities considered themselves engaged to safeguard the breadwinners first of all, and therefore in cases where a large dismissal of employees would have to take place, the married women were the first to be dismissed. It must be emphasized that in certain countries the married women have been reemployed on the deaths of their husbands or have filled up vacancies (Holland).

On the whole, the report gives the impression that the women have succeeded in retaining a considerable part of the gains made during the war and postwar period, and that, considering the economic stress which followed the brief period of prosperity, they have fared better than might have been expected.

Korean Coolie Labor in Japan

AN EDITORIAL in the *Trans-Pacific*, Tokyo, June 12, 1926, describes the increasing seriousness of the labor problem in Japan resulting from the flood of Korean coolie labor which has swept into the country in recent years. A realization of the necessity of making an attempt to meet the problem is shown according to the article in a recent decision of the Ministry of Finance to advance half a million yen¹ at a low rate of interest for the construction of cheap houses for the thousands of homeless Korean laborers.

Although the influx of Koreans is of sufficient magnitude to amount practically to a migration, the Government has not been able to formulate any plan for checking the movement which would be effective and at the same time could be considered legitimate and justified, as Korea is an integral part of Japan and any discrimination against Koreans or restriction of their movements would arouse resentment among them.

Although the unemployment situation is not yet acute, the growing number of Korean laborers is intensifying an undesirable condition. Korean day laborers can live more cheaply than the Japanese and will work for less money so that the situation in Japan duplicates that in the United States where Japanese labor has been in conflict with the higher living standards of American workingmen. In fact, the writer says, "more than one Japanese observer has recently remarked that the Korean labor situation in Japan has brought to him an understanding of and sympathy for the American attitude toward immigrant labor."

Korean laborers in Japan are largely engaged in the heavier and rougher forms of labor, such as road making, railway building, and the hauling of the little man-power carts which form such an important part in the transportation of goods throughout the country.

¹ Yen at par = 49.85 cents; exchange value in 1925 about 45.90 cents.

The great improvement in the standard of living of the Japanese during the past decade has resulted in an unwillingness on their part to perform the harder and more menial tasks, so that as long as they can find employment in other lines of work they are perfectly willing to let the Koreans supplant them at this class of labor. The Koreans live in huts and rude shanties and can subsist on food so coarse that the ordinary Japanese will not touch it.

The article states that, according to the most reliable reports, there are about 133,700 Koreans now in Japan, of whom only about 23,500 are women, a fact giving rise to grave moral problems. Only about a fourth of the entire number have permanent or near-permanent homes, about 64,000 work for a few months in a locality, while the remainder tramp from town to town working at odd jobs and often sleeping out of doors. Such of these as obtain work in labor gangs on road or railroad work are housed in the flimsiest of shanties, living practically the life of campers. The low interest loan for the construction of permanent dwelling houses or tenements is planned by the Ministry of Finance to take care of this class of homeless wanderers. The houses, which will rent for about 15 yen per family per month, will be built in the principal industrial sections around Kobe, Osaka, and Tokyo.

The most serious part of the situation is the racial prejudice against the Koreans, evidenced by the Japanese, the writer of the article stating that throughout Asia, in fact, there is a greater degree of racial prejudice among the different peoples than that between westerners and orientals. Frequent clashes which occur between Korean and Japanese workmen are due, therefore, to both the racial prejudice and to economic competition, and any solution of the problem which is attempted must take both these factors into consideration.

English Mining Industry Act

IN JULY of this year a bill dealing with the English coal-mining industry passed both houses of Parliament and on August 4 received the royal assent, thereby becoming law. The terms of the bill are summarized in the Ministry of Labor Gazette (London), for August, 1926.

The first part of the act authorizes owners of two or more coal mines who wish to amalgamate their properties to prepare a plan for doing so and submit it to the Board of Trade. The owners of two or more properties who wish to amalgamate several properties may likewise prepare a scheme providing for "the total or partial absorption of one or more other such undertakings which are unwilling to amalgamate or to agree to the proposed terms of amalgamation." The Board of Trade is to consider any plan thus laid before it, and if, in its opinion, a good case for amalgamation has been made out, it is to refer the matter to the Railway and Canal Commission. This commission is to hear any objections which may be raised, and may thereafter confirm the scheme, with or without modifications, or may refuse to confirm. A scheme confirmed by the commission becomes binding on all persons. The Board of Trade may assist in planning an amalgamation scheme if the owners wish

for aid. At the end of two years the board is to report upon the operation of this part of the act.

The second part of the act removes some restrictions, making it easier for a person or a company to undertake new mining ventures, and provides for an appeal against restrictive conditions prejudicial to the economical working of any coal, whether the restrictions are contained in a mining lease or otherwise.

Another part lays a levy of 5 per cent upon royalties, the amount thus raised to be turned into the miners' welfare fund and used through the miners' welfare committee to provide pithead baths, until such time as the Board of Trade shall otherwise direct.

A fourth part deals with the recruitment of the mining force.

It provides that the Minister of Labor may, after consultation with associations of employers and workmen in the coal-mining industry, make regulations for securing that, in the recruitment of persons over 18 years of age for employment in the industry, preference shall be given (up to December 31, 1929) to those who were so employed during the week ended April 30 last. There is to be no restriction, however, on the employment of an ex-service man in receipt of a disability pension.

Some minor provisions limit assessments and claims under previous coal acts, and the final section empowers any coal-mining company to establish a profit-sharing scheme if it wishes to do so. The Board of Trade is also given power to plan for the formation of a joint committee, consisting of representatives of the owners and management of a mine and of the workers employed there, "if at any time after the expiration of two years from the commencement of the act the board are satisfied that no adequate opportunity has been afforded by the owner, agent, and manager of the mine for the establishment of machinery for mutual discussion between the parties of matters of common interest in regard to the working of the mine. The functions of any such joint committee do not include any powers in relation to control or management (as defined in the mining industry act, 1920)."

INDUSTRIAL ACCIDENTS AND HYGIENE

Accident Rates in Various American Industries in 1925

THE following table shows accident frequency rates and accident severity rates for several important industries in 11 States in the year 1925. The data are derived from employment figures obtained by the Bureau of Labor Statistics from selected establishments and from accident reports for the same establishments obtained from the State compensation commissions and other State agencies concerned with the collection of accident reports. The 11 States included in the study are: Illinois, Indiana, Iowa, Maryland, Michigan, Minnesota, New Jersey, New York, Ohio, Pennsylvania, and Wisconsin.

The figures here presented are the partial results of the bureau's investigation, the full details of which will be published in a forthcoming bulletin. The investigation is a continuing one and it is to be expected that the reports for subsequent years will cover a much wider field, as regards not only the number of industries and number of employees but also the number of States cooperating with the bureau in the endeavor to make accident statistics in the United States of national scope and of national service.

According to the table, the frequency of accidents was highest in the making of automobile tires (frequency rate 59.08) but the seriousness of the accidents was greatest in the paper and pulp industry (severity rate 4.85). Other industries showing high severity rates were: Structural-iron work, 4.54; planing mills, 4.33; sawmills, 3.29; flour milling, 3.05; steam fittings, apparatus, and supplies, 2.95; agricultural implements, 2.78; and slaughtering and meat packing, 2.62.

ACCIDENT FREQUENCY AND SEVERITY RATES, BY INDUSTRY, IN 11 STATES, 1925

Industry	Number of establishments	Full-year workers	Number of cases of—			
			Death	Perma- nent dis- ability	Tempo- rary dis- ability	Total
Agricultural implements	55	16,295	9	78	1,050	1,137
Automobiles	73	189,385	56	704	4,247	5,007
Automobile tires	25	20,097	4	62	3,068	3,134
Boots and shoes	31	11,200	—	6	252	258
Brick	94	15,595	8	29	1,050	1,087
Carpets	19	10,999	5	33	94	132
Chemicals	31	11,609	3	35	192	230
Electrical machinery	71	60,667	13	229	1,170	1,412
Flour	27	3,616	4	7	203	214
Foundries and machine shops	257	75,404	18	324	3,421	3,763
Furniture	165	24,519	—	80	903	983
Glass	40	12,138	1	18	529	548
Leather	26	9,301	2	30	182	214
Lumber:						
Planing mills	64	9,852	6	58	541	605
Sawmills	22	10,223	11	24	567	602
Machine tools	48	6,033	1	17	332	350
Paper and pulp	34	11,142	5	80	590	675
Pottery	13	3,148	1	3	156	160
Slaughtering and meat packing	13	23,900	15	81	1,645	1,741
Stamped and enameled ware	7	1,473	—	3	75	78
Steam fittings, apparatus, and supplies	44	6,212	1	38	335	374
Stones	29	3,988	1	3	352	356
Structural-iron work	60	6,524	6	42	559	607
Woolen goods	25	12,682	1	13	38	47

ACCIDENT FREQUENCY AND SEVERITY RATES, BY INDUSTRY, IN 11 STATES, 1925—
Continued

Industry	Accident frequency rates (per 1,000,000 hours' exposure)				Accident severity rates (per 1,000 hours' exposure)			
	Death	Per- ma- nent dis- ability	Tem- porary dis- ability	Total	Death	Per- ma- nent dis- ability	Tem- porary dis- ability	Total
Agricultural implements.....	0.18	1.60	23.31	25.09	1.10	1.26	0.42	2.78
Automobiles.....	.10	1.24	17.80	9.14	.59	1.02	.16	1.77
Automobile tires.....	.07	1.03	57.98	59.08	.40	1.06	.84	2.30
Boots and shoes.....		.18	9.88	10.06		.13	.19	.32
Brick.....	.17	.62	30.46	31.25	1.03	.73	.55	2.31
Carpets.....	.15	1.00	4.87	6.02	.91	1.45	.15	2.51
Chemicals.....	.09	1.00	5.63	6.72	.52	1.49	.18	2.19
Electrical machinery.....	.07	1.26	9.46	10.79	.43	1.12	.24	1.79
Flour.....	.37	.65	18.71	19.73	2.21	.57	.27	3.05
Foundries and machine shops.....	.08	1.43	23.62	25.13	.48	1.24	.43	2.15
Furniture.....		1.09	14.96	16.05		.79	.25	1.04
Glass.....	.03	.49	24.37	24.89	.16	.65	.27	1.08
Leather.....	.07	1.08	11.17	12.32	.43	.82	.29	1.54
Lumber:								
Planing mills.....	.20	1.96	19.78	21.94	1.22	2.62	.49	4.33
Sawmills.....	.36	.78	18.49	19.63	2.15	.66	.48	3.29
Machine tools.....	.06	.94	21.09	22.09	.33	.77	.27	1.37
Paper and pulp.....	.15	2.39	20.47	23.01	.90	3.20	.75	4.85
Pottery.....	.11	.32	16.52	16.95	.64	.87	.37	1.88
Slaughtering and meat packing.....	.21	1.13	22.94	24.28	1.26	.94	.42	2.62
Stamped and enameled ware.....		.68	16.97	17.65		.54	.19	.73
Steam fittings, apparatus, and supplies.....	.05	2.04	31.52	33.61	.32	1.89	.74	2.95
Stores.....	.08	.25	43.08	43.41	.50	.24	.45	1.19
Structural-iron work.....	.31	2.15	48.49	50.95	1.84	1.95	.75	4.54
Woolen goods.....	.03	.34	1.59	1.96	.16	.24	.05	.45

¹ This rate is too low, since the industry is located largely in Michigan, which State does not report temporary disabilities terminating in the first week.

The Problem of National Accident Statistics ¹

By LEONARD W. HATCH, DIRECTOR, BUREAU OF STATISTICS AND INFORMATION,
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TEN years ago the then United States Commissioner of Labor Statistics stated in a public address, "Industrial accident statistics for the United States do not exist."² Early in this decade, a complete and very thoroughly considered plan for standard accident statistics in the different States designed to afford national statistics by combination of uniform State figures was completed. And yet the present commissioner, if called upon to state the situation to-day would have to say about the same thing as was said 10 years ago. Evidently there is "a problem" in this matter. Both its importance and its difficulties are recognized by the fact that the program of this conference is devoted mainly to that subject.

What is the matter? Do we not want national accident statistics? If we do, do we know how to get them? Again, if we want them and know how to get them, what is preventing our getting them? And finally, assuming we are going after them, what is the next thing to be done? I take it that a little frank discussion of these practical questions is what is desired under the subject which has been assigned to me.

¹ Address delivered before the Industrial Accident Prevention Conference, Washington, D. C., July 14, 1926.

² Bulletin of the U. S. Bureau of Labor Statistics No. 210, p. 91.

Do We Need National Accident Statistics?

THIS question should not detain us long. Accident statistics are the necessary means of guiding and measuring progress in accident prevention. That is not their only service, but it is a chief one and the one under particular consideration in this conference. So few industries are confined, even in major part, to any one State that national statistics are necessary for the guidance of individual industries or for comparison of one industry with another. Again, national statistics are necessary to enable the individual States to compare experience in the industries within their borders with that in other States and to afford comparisons of one State's experience as a whole with that of other States. Comprehensively stated as a matter of sound method, Doctor Chaney has put it "that for setting up reliable standards of performances national accident rates are necessary." "Such standards," he points out, "to be satisfactory, must be derived from a sufficiently wide experience that they may be trusted not to be unduly influenced by local and temporary conditions. The concerns of a single jurisdiction, even if it be one of the larger industrial States, do not afford a sufficient coverage to permit their being used as a general standard."³ Put in a word as nearly as may be, perhaps, we need national base lines in our accident statistics for comprehensive comparisons of experience.

Do We Know How to Get National Figures?

IT IS the problem with reference to Government accident statistics that we have for consideration here. Obviously, national statistics will have to be provided by the Federal Government. The United States Bureau of Labor Statistics can secure the necessary material in one of two ways, either directly from individual employers in the various States or through the appropriate departments of State governments which require from employers the same sort of information. Two reasons seem sufficient to direct choice between these two to the latter, if not to actually compel that choice. On the one hand, to go directly to employers for industries generally would seem to involve such an amount of work and expense for one agency for the whole country as to make it impracticable. It is true the United States bureau's figures for the iron and steel industry, the best accident statistics in the country so far, are so secured. But exceptional concentration of employees in great plants make this method far more feasible in that industry than would be true for others where much greater numbers of firms would have to be covered to secure adequately representative figures. On the other hand, and more fundamentally, the States themselves must have the same sort of material; and for the Federal Government also to secure it directly from employers simply means duplicate reporting by employers, a thing which should not be imposed unless absolutely necessary, which it can not be said to be. The States can not, of course, step aside and depend on the Federal Government for what they need. Their exclusive function as administrators of labor laws, formulators and enforcers of safety code rules, and administrators of workmen's

³ Bulletin of the U. S. Bureau of Labor Statistics No. 406, p. 118.

compensation laws, puts their need of accident records and reports foremost. No other conclusion seems possible than that the necessary route for the required material is from the employers to State departments and then to the United States department.

Allusion was made above to a plan for standard accident statistics. That plan was for Government statistics. It was developed by the committee on statistics of the International Association of Industrial Accident Boards and Commissions. It was worked out over a period of five years, from 1914 to 1919, after numerous conferences and careful study by statisticians representing both the State and Federal Governments. Standard definitions of terms; standard classifications for industries, causes, nature of injury, and extent of disability; standard methods of measuring exposure and computing frequency and severity rates; and standard table forms for presenting the figures, were all worked out, the whole plan being finally set forth in full in Bulletin No. 276 of the United States Bureau of Labor Statistics. Incidentally, it may be noted that in addition to being indorsed by the International Association of Industrial Accident Boards and Commissions the plan has received in whole or in part also the tacit indorsement of private organizations interested in accident statistics by being followed by them in their own compilations.

Now, it can not be said that the whole purpose of this plan was to make national figures possible. It had and has two purposes: First, to guide individual States in the preparation of what is believed to be generally the best kind of statistics for their own use, and, second, to lay the foundation for national figures by combination of State figures. Here, however, the point to be emphasized is that this second purpose was always prominently in mind as one aim of the plan and, what is more to the point here, the plan if carried out in the various States would have afforded by very simple combination of State figures national figures of the fullest scope. This plan, then, is a complete answer in the affirmative, so far as technical process is concerned, to the question of whether we know how to get national figures. We have all the plans and specifications for full national figures and have had for several years.

Why Are National Figures Still Lacking?

APPARENTLY then, we need national figures, and we know full well how to get them. Still, we do not have them. What, then, is the matter? That seems the next question to answer in this diagnosis of the situation.

It is already implied in what has been said that the failure of the standard plan to produce national figures must run back to lack of development of the foundation for such figures in the figures of the individual States. In other words, the actual application of the plan in individual States has not yet gone far enough to produce combinable uniform figures. The question becomes, then, What has held back development of standard accident statistics in the States?

At this point it should be said that the lack of development of accident statistics along the lines of the standard plan sufficient to afford national figures is not to be interpreted as spelling complete

failure of that plan in the States. It has been useful and influential here and there along the lines of its first purpose (above pointed out) of aiding in the improvement of State figures in more or less conformity with the plan. But any general uniformity, necessary for anything like national figures (the plan's second purpose), is still woefully lacking.

Returning to the question of why development in the several States has been so backward in this matter, let us for a moment turn from the national point of view to that of an individual State department dealing with its own problem of accident statistics. It is worth while to point out, in the first place, that it can not be expected that national accident statistics shall take first place in importance with such a State department as compared with its own State accident statistics. It must not be forgotten that the State department is itself doing, in most cases, the very work which accident statistics, State or national, are designed to aid. As itself engaged in accident prevention and compensation administration each State will inevitably rate as of first importance statistics to throw light on its own experience as a guide for its own safety or compensation administration or legislation. Statistics in scope and form dictated by its particular provisions of law or peculiarities of administrative procedure are the very natural result.

In the second place, it is to some extent true that State needs may to a considerable extent be pretty well met, possibly even in some points better met, and may be more easily met by statistics varying from those of other States by reason of peculiarities in their own laws or procedure, as by statistics modified therefrom so as to produce interstate uniformity.

The above two points are not brought out to justify lack of State uniformity in this matter but only to indicate that State inertia toward interstate uniformity is not unnatural from the purely State point of view. They suggest, too, that such national uniformity will have to be "sold" to the States on the score of benefits to be derived by the States themselves.

Two other points of a more practical sort need to be noted to understand the State situation. One of these is that accident statistics are not the only statistical material which the State departments have to compile to meet their own needs or the demands of their public. The other is that the State departments are anything but free to expend on statistical work the money that they might desire to or that they know would be well worth while for the best interests of the public. Appropriations for statistical work are notoriously difficult to secure from legislatures. Limitations of resources are a prosaic but very real difficulty which the States have to contend with in regard to accident statistics as well as other statistics (not to mention other matters).

These four considerations pretty well explain what has held back the development of State accident statistics along standard and uniform lines. What it all comes to is that the several States are so preoccupied with their own immediate needs in the face of limited means to cover them that modification of their statistical work or additions to it with a view to national statistics make a secondary appeal or do not seem within the capacity of their resources.

What Shall We Do About It?

WHAT does the foregoing diagnosis of the existing situation suggest as the most practical thing to do next? Evidently the problem is in general one of education. The State departments, or the State authorities back of them which control their policies and funds, have to be shown the value of proper accident statistics of their own and the greater value of such statistics when developed so that not only state-wide, but nation-wide comparisons can be made. Much teaching along this line has been done in the last few years through the reports of the committee above referred to and public addresses or articles by those who understand and are interested in the matter, and particularly by representatives of the United States Bureau of Labor Statistics in negotiations with individual State departments. Evidently, however, more impressive propaganda is required, and if I am not mistaken in my interpretation of the purpose of this conference, one of its chief aims is to serve that very purpose. At any rate, one of the useful things it can do is to give a fresh and more powerful impetus to the development of proper State and national accident statistics.

Obviously the more specific and pointed the pressure this conference can exert the better. Now, it so happens that one particular kind of accident statistics is the one which the States almost totally lack, and which they most ought to have, and which also is most needed in national figures. This is accident rates per unit of employment or exposure, by industries. I shall not pause to point out the need of accident statistics in this form. They are simply the only form in which accident figures will really tell us where we are, how far we have come, and how far we have to go in safety work, whether it be viewed in a plant, an industry, a city, a State, or the Nation.

Not only is this the kind of accident statistics which we most lack, but, unfortunately, it is what is hardest for a State department to get. That is because while under compensation laws records of accident occurrence come to a State department as a necessary incident of compensation administration, the figures for employment do not so come in and have to be specially collected and if at all comprehensive in a State of any size industrially such collection is a considerable undertaking. Nevertheless, the need of accident rates makes such collection imperative. If it can not be undertaken on a scale to cover all establishments, then, as a beginning it should be done for groups of representative firms. In some States such employment returns for representative firms are collected and published for information about employment conditions. In these it would be a natural starting point for accident rates to coordinate the accident and employment figures for such already established representative lists.

Now, as a matter of fact, the foregoing, arrived at by analysis of the fundamentals of the matter, brings us precisely to the point at which we make contact with what the United States Bureau of Labor Statistics has already under way as a beginning of national accident statistics. For some time there has been in operation a co-operative arrangement between that bureau and a number of the State departments for the collection of uniform reports of employment from representative lists of firms in manufacturing. Under this arrangement where the State and Federal Governments cover

the same firms, the State collects the reports and supplies the Federal bureau with copies, a plan which is economical for all concerned, and which serves the purposes of both State and national statistics of employment. In this is the foundation for accident rates for representative firms above noted as what at least should be utilized as a start toward proper accident rate statistics. Commissioner Stewart has already begun building some national figures of this scope by securing from some of the States the corresponding records of accidents for selected lists of these firms for which employment reporting was previously established.⁴ Obviously this is going at the problem in a practical way at the most logical and most feasible point. To whatever extent it may be fruitful, it will be, of course, only a partial and incomplete solution of the problem of accident rates, either State or national, but it will require only expansion of the reporting of employment and compiling of the accident records for larger and larger lists of firms to make it grow toward the ultimate goal of complete accident rates for all firms.

State Action on National Safety Codes

THE American Engineering Standards Committee has approved safety codes on the following:⁵ Lighting of factories, mills, and other work places (Bul. No. 331); protection of industrial workers in foundries (Bul. No. 336); use, care, and protection of abrasive wheels (Bul. No. 338); specifications of laboratory tests for approval of electric headlighting devices for motor vehicles (Bul. No. 350); construction, care, and use of ladders (Bul. No. 351); mechanical power-transmission apparatus (Bul. No. 364); laundry machinery and operations (Bul. No. 375); woodworking plants (Bul. No. 378); lighting for school buildings (Bul. No. 382); paper and pulp mills (Bul. No. 410); power presses and foot and hand presses; logging and sawmills; and protection of heads and eyes of industrial workers.

In order to ascertain to what extent the States are making use of these codes or are formally adopting them, the Bureau of Labor Statistics sent to each a questionnaire covering these points. The reports received are summarized below.

Alabama.—No safety codes or regulations and no factory inspection department. Recent developments indicate that the Associated Industries are becoming interested in the matter.

Arizona.—None of the codes adopted, but officials are "very much interested" in them.

Arkansas.—None of the codes adopted. The only codes observed are those promulgated by electrical and American engineering associations. In general, whatever safety measures are enforced are largely voluntary, with sometimes a city ordinance governing to some small degree. Some proprietors of laundries, woodworking plants, printing plants, etc., provide safety appliances in conformity with recommendations of companies manufacturing such appliances.

California.—Safety orders concerning most of the subjects have been adopted. State points out that several of the American Engineering Standards Committee codes, such as the logging and sawmill code, were based upon codes in force in California prior to adoption by committee.

National codes have not been used as a basis of any orders adopted by the State commission, but as revisions are undertaken the codes will be carefully studied and whenever possible the national engineering standard will be adopted.

⁴ See preceding article, p. 41.

⁵ Those followed by a bulletin number have been published by the Bureau of Labor Statistics.

Colorado.—None of the codes adopted as yet, but it is hoped at next session of the legislature in January, 1927, to secure adoption of those codes directly applicable to the needs of the workers. In the meantime the codes are used wherever it is possible to do so.

Connecticut.—None of the codes adopted.

Delaware.—None of the codes adopted. State has no official safety code, but uses the Pennsylvania provisions.

Florida.—None of the codes adopted.

Georgia.—None of the codes adopted, and no law permitting adoption. Expect to adopt code for paper and pulp mills "in so far as have the legal right to do so."

Idaho.—No codes. Industrial accident board has adopted principle of asking industries to adopt codes of American Engineering Standards Committee with such modification as may be necessary due to local conditions. Plan has been well received, especially in sawmills and lumber industry.

Illinois.—None of the codes adopted. Factory inspection division of the State labor department has requested authority to draw up safety codes, and specific mention was made in annual report for 1923-24 of desirability of codes like those drawn up by American Engineering Standards Committee.

Indiana.—None of the codes adopted, and State law contains only general provisions as to safety.

Kansas.—None of the codes adopted, but inspectors are instructed to follow closely American Engineering Standards Committee standards in issuing orders in industrial plants inspected.

Louisiana.—No law regulating codes, but passage of safety and lighting code is to be recommended at next session of legislature.

Maine.—None of the codes adopted as yet, but matter will again be brought up in 1927 legislature.

Maryland.—No power to formulate codes. Has rules governing approval of electric headlighting devices for motor vehicles.

Massachusetts.—Rules adopted for lighting of factories, mills, and school buildings, and for foundries, woodworking plants, and power presses. Statutory provisions cover in part the national codes on abrasive wheels, laundries, and sawmills; also protection of heads and eyes of industrial workers. State has other codes not yet covered by Engineering Standards Committee.

Where there have been codes at time of considering publication of a code, they have been used, as have also codes of any other State.

Michigan.—None of the codes adopted.

Minnesota.—All codes mentioned (except those on electric headlighting devices and lighting of school buildings) have been approved, but not adopted, by industrial commission. National safety codes so approved are referred to by inspectors who are guided by them to a large extent in connection with their inspection work. This is especially true in cases where codes cover subjects or dangerous places not specifically covered by the State safety act.

Mississippi.—None of the codes adopted, nor any rules governing same.

Missouri.—None of the codes adopted, but State gets much valuable aid from them.

Montana.—None of the codes formally adopted, but State requirements are substantially the same as those of codes.

Nebraska.—None of the codes adopted.

Nevada.—None of the codes adopted, but some of the State requirements as to power transmission and grinding wheels coincide exactly with national codes and remainder are substantially the same, though not so detailed. Officials are interested in the subject of safety regulations and intend to publish the State mining regulations and the general safety orders.

New Hampshire.—None of codes adopted, but where State has made rules these, though not so detailed, are substantially the same as those of national codes.

New Jersey.—Codes on lighting of factories, mills, and other work places, abrasive wheels, mechanical power-transmission apparatus, woodworking, and power presses have been made effective. State also has in effect a tentative draft of a code for the rubber industry, which is practically the same as that in course of preparation by the American Engineering Standards Committee; and this will be modified to conform to the national code when finally adopted.

The State labor commissioner reports that—

"It was always the practice of this department prior to the functioning of the American Engineering Standards Committee to formulate independent New Jersey standards, but through our activities with the various sectional committees of the American Engineering Standards Committee and membership on the correlating committee of the American Engineering [Standards] Committee it has become very apparent that, notwithstanding the field experience of our engineers covering many years of association with the various hazards, we could bring to our industries a much broader experience through active participation in the deliberations of these committees in the formulation of standard forms of codes. We have therefore become enthusiastic supporters of the American Engineering Standards Committee activities, and have assigned our representatives, consistent with expense, on all work associated therewith, in order to reap the greatest possible benefit. We have, wherever consistent, modified or amplified existing regulations to harmonize with the American Engineering Standards Committee findings and have, as you are already aware, taken the initiative in securing action on the part of the American Engineering Standards Committee in the formulation of new codes, the latest instance of this being the code relating to the hazards incidental to the operation of inrunning rolls (mills and calenders) in the rubber industry.

"We are very well pleased with the results, and expect to continue to give of our time and effort to the unification of this work, as it is evident to even the casual observer that only through the standardization of safety practices are we to reach the root of the evil, the producer of the machine requiring treatment, so that the necessary safeguards may be incorporated at the time of manufacture."

New York.—State has adopted rules covering in whole or in part the subjects of all the national codes except those on electric headlighting devices and the lighting of school buildings (which do not come within the jurisdiction of the department of labor) and those on sawmills and protection of heads and eyes of workers. The national safety codes are utilized in the formulation of codes as far as possible, but report points out that most of the New York codes were developed before the national codes had been published. The most extensive use of a national code in this State was made recently in connection with laundries. It is the intention of the State code bureau to coordinate with the national codes as far as possible.

North Dakota.—None of the codes adopted. State has certain mining codes.

Ohio.—Codes in force in Ohio were all formulated prior to publication of national codes. State codes are now in force on foundries, abrasive wheels, and woodworking, and codes are being formulated on high-pressure piping and refrigeration, cranes and hoists, power and manual presses, quarry operations and stone finishing, head and eye protection, laundries, painting operations, textile and mattress manufacturing, electrical installation, construction machinery, window cleaning, farm labor, industrial sanitation, industrial lighting, and fuel-oil installation or heating apparatus (including powder coal), in connection with which the various national codes will be used by the committees in charge.

"The codes of the Engineering Standards Committee present a vast amount of research and study and, representing the best authorities of the country as they do, there can be no question of their value. We feel sure that the principles of these codes will be incorporated in any additional codes prepared for adoption by the industrial commission of this State. Already the committee on high-pressure-piping code has been appointed and is now functioning. The Engineering Standard Code on refrigeration and piping is embodied in the code which is being prepared by this committee."

Oklahoma.—State has adopted code on lighting of factories, mills, etc., based largely on New York code; code on construction, care, and use of ladders applicable only to steel-tank erections, taken mainly from national code; and code for mechanical power-transmission apparatus, taken largely from Safety Practices of the National Safety Council and universal safety standards.

Oregon.—State has adopted United States Bureau of Standards code for installation of wires and equipment to carry electric current; codes of American Society of Mechanical Engineers on boilers and construction and operation of unfired pressure vessels; and a very elaborate lighting code worked out by a State committee. A committee is to be appointed to promulgate a safety code for mechanical power-transmission apparatus and an effort will be made to secure the adoption by this committee of the national code.

Pennsylvania.—It is the declared policy of the State department of labor and industry to adopt national codes whenever the provisions are applicable to

conditions in Pennsylvania. The State has adopted without change the national headlighting code, and with very little change the lighting and ladder codes. The State foundry code was adopted prior to the publication of the national code but is substantially the same, as is also the State "head and eye" code. A new State laundry code has been drafted which is based upon the national code; also a woodworking code containing all of the national provisions applicable to Pennsylvania conditions. The national codes on abrasive wheels and power transmission, now being revised, will be adopted by the State, if satisfactory. The present revised national power press code will be adopted with further revision to suit local conditions.

Rhode Island.—No codes. Paper and pulp mill code will be brought to attention of next legislature.

South Dakota.—None of the codes adopted. Code for paper and pulp mills to be presented to next legislature.

Tennessee.—State has adopted, "from the information furnished by the American Engineering Standards Committee," safety codes on foundries, polishing and grinding machines, woodworking machinery, power presses, and operation of metal machinery, safety rules and regulations, and machinery standards, a handbook of industrial safety standards covering metal machinery, and a pamphlet outlining the regulations for toilets, wash rooms, and foundry bath.

Texas.—None of the codes adopted, "but wherever possible, American Engineering Standards Committee standard is enforced." Endeavor will be made to have a bill passed at next legislature legalizing the national standards.

Utah.—State has adopted, in full, national codes on abrasive wheels, laundries, and woodworking plants; and, in part, those on lighting of factories, mills, and other work places, and on foundries, ladders, power presses, sawmills, and protection of heads and eyes of industrial workers.

Vermont.—None of the codes adopted, but are "used informally as far as possible in making recommendations and orders."

Virginia.—State laws do not permit bureau of labor and industry to adopt safety codes, but national codes are "used in an educational way" among the various industrial plants. Officials will endeavor to have code for paper and pulp mills made effective.

Washington.—General safety standards of State "partially cover most of the industries" covered by national codes. Report, however, does not state whether these standards follow those of the American Engineering Standards Committee.

West Virginia.—No State rules adopted, but State bureau of labor "looks with favor" upon the national codes, and factory inspectors are governed by these codes. Report states the opinion that the State will, in the not far distant future, adopt the safety rules of the American Engineering Standards Committee in their entirety, since these rules conflict in no way with the State laws or with conditions in the manufacturing industries of the State.

Wisconsin.—None of the codes adopted. State has codes on industrial lighting and lighting of school buildings similar to the national codes; also has general safety orders on subject matter of several of the other national codes, such as abrasive wheels, power presses, etc. Inspectors, however, also make use of national code on abrasive wheels.

An advisory committee is being organized for the purpose of amending and adding to the general safety orders, and it is expected that this committee will make use of all of the codes issued by the American Engineering Standards Committee that are applicable to Wisconsin conditions.

Wyoming.—All safety standards of State are those covered in national codes. "We work entirely to Federal standards and find them very satisfactory."

Reduction of Accidents Through Safety Court¹

A REDUCTION in the number of accidents from 30 or more a month to 4 has been effected at the plant of the Newport Rolling Mill Co., Newport, Ky., by the establishment of a "safety court," which tries employees accused of carelessness. A safety judge having no immediate contact with any of the company's

¹ Iron Age, New York, Sept. 9, 1926, p. 713.

workmen presides over the court, while fellow employees act as prosecuting attorneys. After the judge has rendered his decision an appeal can be taken to a reviewing board, consisting of the general superintendent, the assistant to the president of the company, and the superintendent of the galvanizing department.

Offenders convicted by the court are sentenced on a day basis. At the end of a year an employee is automatically discharged if his assessed fines or penances total 100 days. Careful watch upon the observance of safety rules is kept by a group of workmen appointed safety inspectors by the general superintendent. Carelessness on the part of any employee is reported to the general superintendent, who in turn notifies the foreman of the department in which the man is working. The offender is then instructed to appear before the safety court. Names of the safety inspectors are not divulged.

Occupational Dermatitis¹

A PAPER on skin diseases of an occupational origin, by Dr. R. Prosser White, which was read at the Fourth International Congress of Industrial Accidents and Diseases, Amsterdam, September, 1925, is published in the September issue of the *Journal of Industrial Hygiene*. It is an interesting fact, the writer says, that the majority of industrial physicians do not realize that occupational skin diseases present a greater variety of lesions than those of syphilis and tuberculosis combined and that some of these diseases also have a longer latent, or incubation, period than those having a syphilitic origin.

In cases of occupational dermatosis it is said to be important to determine whether or not the patient has a normal skin because in the case of a hereditarily tender or weak skin the period of recovery will be prolonged; secondary infections which are common complications must be prevented in the treatment of these diseases; and consideration must be given to any tendency the irritant has to produce sensitization. A dermatitis or eczema is idiopathic if it is inborn in the individual or is acquired as a result of indiscretions in diet, through a hereditary peculiarity of the blood or tissues, or from numerous unknown reasons; while it is traumatic if it is a reaction due entirely to the agent used in the industrial process. On the other hand, there may be a biologic or chemical correlation between the skin and the agent which will result in an excessive cutaneous reaction or other unusual features showing that the agent has caused sensitization. As sensitization can change the type and features of an eruption as well as alter the duration and severity of the disease, it is evident that in such a case it is not advisable for a person to follow work involving exposure to the sensitizing agent.

The symptoms of idiopathic and traumatic eczema are practically identical, but the former often runs a tedious and prolonged course while the latter, unless there are complications, has a definite limit. In making a differential diagnosis, therefore, the history and duration of the disease and the exact nature and kind of materials worked among must be considered. Individual tendencies and weaknesses

¹ *Journal of Industrial Hygiene*, Baltimore, September, 1926. "Modern views on some aspects of the occupational dermatoses," by R. Prosser White, M. D.

often make it difficult to determine to what extent the condition is due to the unhealthy condition of the skin and how much to the material used. Many of these individual weaknesses or defects prolong the period of convalescence and complicate recovery and for this reason physical examination on entrance is important both for the industry and for the individual in eliminating those suffering from any skin complaint or physical disability which might disqualify them later. In a plant with which the writer is connected where there is a constant risk of exposure to noxious dust, 10 per cent of the applicants are rejected as a result of the physical examination, the majority because of some cutaneous disability.

Substances Affecting the Skin

ALL materials which destroy the horny layer of the skin produce a prompt effect, examples of materials having an immediate solvent action being the alkalies and alkaline earths—lime, soda, and the sulphides. These substances produce sores which are superficial rather than deep and there is always risk in working with them if they are handled in sufficient strength. Other harmful substances such as chrome have little effect on the horny layer of the skin, but as soon as this is broken, oxidation or other chemical action starts. The time taken by a traumatic sore to heal depends upon the extent and depth of the lesion. There is no danger of malignancy from certain substances such as chrome, although the irritation from it may be lifelong, while other substances such as tar and soot may cause malignant growths. The malignancy can not be brought about solely by the irritation of acute or chronic inflammation, but depends upon specific peculiarities one of which is special to the tissues and the other depends on the specific activity of the agent. It is not until recently that the latent effects of some of these cancer-producing substances have been realized, such materials as soot, tar, and spinning oils producing cancerous growths in many cases only after many years of exposure or long after the exposure has ceased.

Arsenic.—The fumes of arsenic were recognized as a cause of cancer among copper smelters as early as 1820. Following that discovery, malignant growths were found among workers in factories making Paris green and in "sheep dip" factories, and in recent years cancer has been produced experimentally from arsenic by external application alone. In industry the growths do not appear until after 20 to 30 years' contact with the arsenic. Although arsenic is not known to cause cancer in any of the tissues of the body except the skin, the writer questions whether, in industries where fine arsenical dust is diffused through the atmosphere and is absorbed by the lungs and stomach, this absorption is not likely to have a greater effect in causing cancer of the skin than the local irritative effects on the skin.

Petroleum and shale oils.—The dangers to workers in the petroleum industry depends, aside from the length of exposure, on the kind of oils handled and the heat used in distilling them. Oils from certain sections are not important as a cause of new growths but, in general, hazards connected with the use of bituminous coal and oil products are increased according to the temperature at which the products have been evolved, one investigator having turned a noncancer-producing oil into a cancer-producing one by submitting it to great heat.

More than 500 cases of cancer occurring in the cotton-spinning industry have been reported by British investigators. These cancers have been shown to have been caused by the lubricants used. The spinning oils are supposed to consist of the more refined products and are carefully clarified but the danger is probably due to adulteration or mixture with some of the cruder distillates. The petroleum oils are less likely than coal tars to produce cancer. The prospect of developing cancer among shale-oil workers has been found to be 0.5 per cent and although shale oil is obtained at a temperature of 700° C. there is less danger from it than from tar and soot.

Tar and pitch.—These substances are agents in the causation of cancerous growths in industry, an examination of men in one tar distillery showing that a serious proportion had evidences of some pre-cancerous activity. Cancer has been produced experimentally in white mice after a four-month interval following a single painting with tar.

Primary Lesions

ALL OF these substances have a practically identical action on the skin, any modifications depending on the dose and the length of contact. The earliest effect is a redness of the skin, as any repeated and continuous action of the irritant, whether arsenic, oil, or tar, must eventually cause a permanent dilatation of the skin capillaries so that in time the skin becomes dusky and congested. Another primary lesion is the scaly papule which is often itchy at first until it is broken by scratching. The mouths of the hair follicles are closed in the oil and coal series by the materials handled which form black dots while in arsenical dermatitis the follicles are blocked by horny plugs. These three types of lesions apparently precede all further troubles.

Cancerous skin growths, it is said, invariably follow exposure to "tar, arsenic, aniline (?), and certain petroleum and tar products," and to radiations if the exposure is sufficiently protracted or repeated. Experiments with sensitive animals have shown that exposure to these agents need be neither long nor frequent in order to induce cancer and if this holds good for the human skin it can reasonably be assumed, the writer says, that even a casual or occasional contact with these substances may have serious consequences.

Survey of Public Health Services in 15 Illinois Cities, 1925

IT IS now recognized that the health of the worker, which is perhaps his greatest asset, is dependent in very great degree upon the health conditions of the community, over which he as an individual has practically no control. For instance the individual is compelled to use the local milk supply, and if this is not properly supervised and controlled by public inspection, no amount of care on his part can prevent possible danger to himself and his family.

The efficiency of the public health services of the State and city thus becomes of vital significance to all members of a community, but especially to the industrial workers, who because of low income are often compelled to live in sections of the community and under hous-

ing conditions which are particularly conducive to the communication of disease.

Much interest attaches, therefore, to an appraisal¹ in 1925 of the public health services of 15 municipalities in Illinois undertaken at the suggestion of the health director of that State, Dr. Isaac D. Rawlings. The project was planned and supervised by Dr. Thomas Parran, jr., of the United States Public Health Service.

The formulation of standards for health service has occupied the attention of many public health authorities in recent years. After much deliberation, and after studying the health practice in more than 150 American municipalities, tentative standards for health service have been developed under the leadership of the American Public Health Association. The method adopted by this organization seeks to measure the status of health service in a city by applying a numerical score. Values are assigned to all usual health activities; each of the 46 items of health service is scored; these scores are divided into 8 sections representing groups of activities such as vital statistics; communicable disease control; venereal disease control; tuberculosis control; health of the child; sanitation; food and milk control; water and sewerage. The total score for all health services in a city equals 1,000 points. The scores in general are based on character and extent of the health service rendered regardless of whether it is done by an official or voluntary agency.

According to the report of the survey, the method described above furnishes in general "an accurate picture of the health service in this group of cities."

"Money invested in public health service pays handsome dividends." The survey indicates that there is a very direct relation between the achievements of health services and the size of the funds available for such service. Expenditures through local health departments ranged per capita from 8½ cents in Moline to 61 cents in Evanston, the average for the 15 cities being 28 cents. The per capita expenditures by all health service agencies ran from 36 cents in Moline and Danville to \$1 in Evanston, the average for the whole group being 59 cents. The present health service expenditures in many municipalities are not sufficient to carry out "the minimum necessary health program."

The chief hindrance to municipal public health service results from "the baneful influence of local partisan politics." The communities which rank the highest in this survey have established their health services "on a scientific rather than a political basis." The report stresses the fact that material progress in health service is dependent upon the removal of municipal health departments from the domain of politics.

Decatur, Springfield, Bloomington, and Quincy each employ a health officer whose whole time is taken up with his official duties. The Rockford health officer is practically on full time. In nearly all of the other 10 municipalities the health officers are poorly paid and spend comparatively little time on health work. Only four of the cities have a well-defined scheme for the complete coordination of all their public health services.

On the whole, the status of the health activities in these municipalities closely indicates to what extent local physicians have manifested sympathetic interest in city health problems. The medical profession seems to have adopted no state-wide policy with reference to various phases of public health service. Harmonious progress would result

¹ Illinois. Department of Public Health. Illinois Health News, Springfield, May-June, 1926.

from a more vital interest of the medical societies in indorsing and directing municipal health programs.

A striking and unnecessary diversity of methods is shown in different cities in dealing with the same health problem. The State public health department should assume the leadership in formulating approved methods for carrying on all kinds of municipal health work.

In the following statement a comparison is made, in percentages of the standard score, of the total health services in the municipalities covered in this Illinois survey.

	Score		Score
Evanston	81.2	Aurora	52.1
Rockford	77.0	Quincy	47.2
Decatur	69.5	Rock Island	46.9
Springfield	66.7	Bloomington	46.1
Oak Park	59.9	Danville	44.8
Peoria	58.0	Joliet	44.6
Moline	57.1	East St. Louis	41.5
Cicero	52.6		

As indicated in the preceding tabulation, Evanston leads with a total score of 81.2 per cent for all health activities. Rockford follows with 77 per cent, while Decatur, Springfield, and Oak Park received, respectively, ratings of 69.5, 66.7, and 59.9 per cent. The most unsatisfactory total score is that of East St. Louis—41.5 per cent. The average score for all health service in the 15 municipalities is 56.3 per cent, which is only a little more than half of what might reasonably be accomplished by these communities in the way of health service.

Vital statistics.—The birth and death data being recorded by the 15 municipalities are reasonably complete, many of these cities, however, are not availing themselves of the knowledge to be secured from a study of their death statistics. On vital statistics work, Rockford's score is 100 per cent, while Peoria's is only 40 per cent.

Control of communicable diseases.—The only uniform practices on communicable diseases control are those regulated by the State. Evanston holds the first place in the control of such diseases with a score of 81.7 per cent. The average rating is 56.3 per cent. A nursing service for communicable diseases was needed in all cities at the time of the survey and has since been inaugurated in some of them. In only two of the 15 municipalities (Evanston and Decatur) have the health departments interested themselves in the problem of preventing diphtheria by giving toxin-antitoxin. In the matter of smallpox prevention the great majority of the cities have an unenviable record.

Venereal disease control.—Venereal clinics have been established in Springfield, Decatur, Rockford, Peoria, and East St. Louis. In the other cities there are no organized facilities for the treatment of poor patients. "Every city should provide facilities for the free treatment of indigent persons suffering from venereal disease." In a number of cities physicians are failing to comply with the law in reporting cases of this disease. "Measures for the control of venereal diseases constitute one of the most important of the unsolved health problems of the present day."

Tuberculosis control.—In general, the antituberculosis activities were "well organized" but none of the 15 cities had a perfect score.

In this connection Rockford ranked highest with a rating of 84 per cent. The score for both Evanston and Peoria was 76 per cent. The average rating for all cities was 59 per cent, while that for East St. Louis was only 14 per cent. The most fully developed and most widely employed service in tuberculosis control was field nursing, while prevention or day camps and open-air class rooms were the most neglected measures.

Health of the child under school age.—Evanston scored 100 per cent for its prenatal, infant, and preschool hygiene work, while Bloomington's rating was only 19.5 per cent, the average score being 49.4 per cent. The infant welfare centers showed no uniformity in method or technique. In Peoria, for example, the attendance is chiefly confined to sick babies of the poor. In other cities the clinics function mainly along educational and preventive lines, being used to a greater or less extent for advising mothers in the matter of hygiene.

A definite policy regarding the most desirable methods for the organization and operation of prenatal, infant, and preschool clinics should be agreed upon by the State department of public health and the State medical society and the acceptance of this policy should be urged in these and other cities. These clinics should serve two functions:

1. Treatment and cure only for persons unable to pay private physicians.
2. Education of the mother and expectant mother in the fundamentals of infant and maternity hygiene.

Health of the school child.—Peoria is the only municipality which has a full-time school physician and a full-time dentist. It outranks all the other cities on health service for school children, having a score of 85.3 per cent. Decatur, Oak Park, and Evanston score above 70 per cent, but Quincy and Danville are below 40. There is no medical inspection service for school children in 8 of the municipalities and in 7 no organized dental hygiene measures.

Sanitation.—The average score for sanitation services was 66 per cent, Evanston, Cicero, and Oak Park having a record of over 90 per cent. Health in many of these cities is menaced by numerous open wells and privies. A well-defined policy for the operation of the sanitary inspection service is needed in Aurora, East St. Louis, Moline, Peoria, Decatur, Rock Island, Danville, and Joliet. Records of such service should also be maintained. Similar recommendations are made for these eight cities and also for Springfield with reference to the organization of their food establishment health service.

Control of milk supply.—The average score, 42.3 per cent, for the sanitary supervision of milk indicates serious neglect of this health service. A lack of inspection is the principal sin of omission in the cities covered in the survey, with the exception of Rockford, which has a score of over 81 per cent. Almost 100 per cent of the milk supply in Evanston is pasteurized, and more than 90 per cent in Oak Park, Rockford, Cicero, Springfield, and Joliet. The amount of pasteurization in Moline, Danville, and Decatur, however, is below 50 per cent.

Health laboratory service.—Well-organized local public laboratory facilities for health service are reported for Rockford, Aurora, Evanston, Quincy, Decatur, and Oak Park. Springfield can conveniently avail itself of the State laboratory. The remaining six cities are in need of more adequate provisions for this character of health work.

Popular health instructions.—Rockford received the highest rating for popular health instruction, being "the only city (of the 15) in which the health department publishes monthly and annual reports through a health bulletin." Decatur, Springfield, Oak Park, and Evanston rank next in the order named. "Generally speaking, purely educational service is the most neglected aspect of health work in the 15 cities surveyed." The average rating for such activity being 29 per cent.

General recommendations for administration of public health service.—The following recommendations are applicable with a few exceptions to all the cities covered by the survey:

1. Appointment of full-time medical health officers trained especially for that work.
2. Organization of active boards of health with overlapping terms for each member in order to insure continuity of policy and tenure of office in the health department.
3. The development of comprehensive public health plans or programs.
4. Coordination of all public health activities to conform with a well-defined plan.
5. The adoption of such ordinances as may be necessary to give the health officer authority sufficient to fulfill his duty.

WORKMEN'S COMPENSATION AND SOCIAL INSURANCE

Passage of Old-Age Pension Act in Kentucky

THE Kentucky Legislature in its recent session passed an old-age pension law, which was signed by the governor on March 25, and became effective June 24, 1926. The maximum pension provided is \$250 a year. The county is the unit of administration, and it is optional with each county to adopt or refuse the plan.

Montana, Nevada, Wisconsin, and Alaska preceded Kentucky in authorizing this method of caring for aged dependents, and a number of other States are at present considering the matter. In Oregon, according to American Labor Legislation Review for June, 1926, an old-age pension initiative bill was submitted to the officials to be placed upon the ballot and voted upon in November of this year. In Massachusetts, Virginia, and Indiana official commissions have reported in favor of establishing old-age pensions by law, but the legislatures have not yet taken final action on the reports. New York recently appointed a joint legislative committee, with an appropriation of \$5,000, to survey and report upon the situation of the aged poor in the State, with a view to legislative action. Similar commissions were appointed in 1925 by Colorado and Minnesota.

Workmen's Compensation Report of Tennessee

WHILE the workmen's compensation act of Tennessee is one classed as being administered by the courts, the State department of labor is authorized to receive reports of accidents and copies of all settlements. Settlements are to be approved by the courts, but it is said that "the records will show that less than 5 per cent of them are approved by the courts." The division of workmen's compensation in the department of labor therefore undertakes to check closely all settlements reported to it, and if they are not in conformity with the provisions of the law a corrected settlement is requested. As a basis of such correction injured employees are communicated with, the statements of physicians are secured, and the facts in general are developed.

The current report of the workmen's compensation division included in the third annual report of the department of labor, covers the calendar year 1925, during which 51 different claims where final settlements had been made were reopened, and additional payment secured ranging from \$8.25 to \$1,080, or \$10,224 in all. Other statements indicate that this division, though without authority to pass on disputed claims, is influential in securing their adjustment, and,

in general, in making the law effective. On the receipt of the original accident report a form letter is mailed to the injured person, stating the essential provisions of the law and informing him as to the proper steps to be taken in making settlements. In serious cases dependents of the injured workman are immediately informed as to their rights under the law and proper blank forms are furnished for the giving of notice of claims for compensation. Appreciation is expressed of the cooperation received from employers and insurance carriers in regard to correcting erroneous settlements, as during the year "no employer or insurance carrier refused to make a corrected settlement when the facts were placed before them." However, differences of opinion existed in some cases as to the application of the law, calling for action by the courts.

Another function of the division is the maintenance of files covering reports on employer's proof of insurance. These certificates must be renewed yearly, and 4,816 were issued during the year. Insurance companies writing compensation insurance make reports to the division. Of the 4,816 employers operating under the law, 132 were self-insurers employing approximately 39,000 employees.

During the year, 25,569 reports of injuries were received, of which 10,457 called for compensation; 162 were fatal cases. Of this last class, settlements and memoranda of agreements were received in 102 cases, the total awards amounting to \$335,734, or an average of \$3,291 per case. There were 287 dependents, or an average of 2.7 dependents per case, no dependents being left in 20 cases.

Tables show the number of accidents reported and the amount of compensation paid therefor during the calendar year, besides adjustments reported from old files which were closed during the year. Thus, 25 cases credited to the year 1919 terminated during the year 1925, 159 from the 1920 files, and 136 from those of 1921. The total number of cases coming over was 2,444, of which nearly one-half (1,074) were from the 1924 files.

The number of accidents classed by industries and causes and by industry and nature conclude the tabular presentation.

Mothers' Pensions in Ontario

THE Fifth annual report of the Ontario Mothers' Allowances Commission shows that for the year ending October 31, 1925, pensions were paid to a total of 5,007 families, in which there were 14,577 children under 16. The total amount paid in pensions for the year was \$1,781,281, an increase of \$73,387 over the previous year. The cost of administration was reduced to 4 per cent.

Attention is called to the fact that one-eighth of the whole expenditure for pensions (\$228,482) was directly due to tuberculosis, being paid to families in which the fathers had either died of the disease or been totally incapacitated by it or in which both parents had died of it and the children were being supported in foster homes.

The pensions are administered through a central commission and 100 local boards, with the aid of 17 investigators, who keep in the closest possible touch with the families in receipt of the pensions. The pension may be withdrawn at any time if the home conditions

are unsatisfactory, so it serves as a powerful incentive to improvement in households of the less desirable sort. The investigators agree that with the definite allowance to count on, and the advice and sympathetic interest of the visitors and local committees at their service, the mothers accomplish far more in the way of advance than the money value of the pension could be expected to produce. Homes are kept together and improved, and children are kept in school until they have something beyond the bare minimum enforced by law. Moreover, when they do leave school it is not a matter of necessity for them to take the first job which offers, regardless of its possibilities. On the contrary, it is often possible to place them in work suited to their tastes and capacities, in which they have a good prospect of advancement.

Data given concerning the beneficiaries of the pension during the year show that of the 5,007 families aided nearly 50 per cent had one or two children under 16 (all but 77 of these having 2), 25 per cent had 3, 14 per cent had 4, while in the remainder the number of children under 16 ran up as high as 11 in one case. The average number of children per family ranged from 2.71 in towns to 3.35 in judicial districts.

In 828 cases the pension was canceled during the year. In over half of these (429 cases) the cancellation was due to the fact that one or two children reached 16 or left school or that the widow remarried. Three pensions were canceled because of false information given at the time of application and 75 because of unsatisfactory home conditions. In the other cases the family had become able to support itself, the incapacitated husband had recovered, the family had moved away from the Province of Ontario, or there was some other cause not involving any reflection upon the character of the beneficiaries.

HOUSING

Building Permits in Principal Cities of the United States: First Half of 1926¹

ON JULY 1, 1926, the Bureau of Labor Statistics began the collection of data concerning building permits issued in the first six months of 1926 in the 78 cities of the United States which had a population of 100,000 or over according to the estimate of the Census Bureau as of July 1, 1925. The data were in most instances obtained by mail from the city building officials. In a few cases, however, it was necessary to send agents of the bureau to cities to compile the information from the official records of such cities. The States of Massachusetts, New York, New Jersey, and Illinois, which now collect similar information from cities within their borders, have cooperated with the bureau in this study, the data being supplied to the bureau by State officials who collect these reports monthly.

Prior to 1926 data were collected semiannually from the 68 cities which had a population of 100,000 or over according to the 1920 census. The scope of the inquiry was this year extended to include 10 other cities which, according to the estimate of the Census Bureau, have since the last census reached a population of 100,000.

Table 1 shows the total number of new buildings and the number and estimated cost of each of the different kinds for which permits were issued in the 78 cities during the six months ending June 30, 1926, the per cent that the number of each kind forms of the total number, the per cent that the cost of each kind forms of the total cost, and the average cost per building.

As shown by the table, 54.1 per cent of the buildings for which permits were issued in the 78 cities during the period covered were residential buildings, and 66.8 cents out of each dollar spent on the construction of new buildings in these cities was for this class of structure.

It should be remembered that the costs as shown in these tables are estimated—that is, they are the costs as stated by the prospective builder at the time he applies for a permit. In some cities this amount is checked over carefully by officials in the building commissioner's office. In other cities the check is not so careful or may not be made at all. There is a tendency for the builder to underestimate the cost. In some cities permits are charged for according to the cost of the building, and this prompts the builder to keep his estimate down but impels the inspector to keep it up to the proper amount. Another reason that tends to keep estimates low is that an owner-builder may have the idea that taxes are assessed according to the cost shown on the building permit. Partly counterbalancing the tendency to low estimates is the fact that speculative builders may at times overestimate the cost in order to impress prospective buyers.

¹ Earlier reports concerning building permits issued in the United States were published in Bulletins Nos. 295, 318, 347, 368, and 397 of the Bureau of Labor Statistics, and in the Monthly Labor Review for July, 1921; April, 1922; July and October, 1923; June and October, 1924; June, July, and October, 1925; and June, and July, 1926.

TABLE 1.—NUMBER AND COST OF NEW BUILDINGS ACCORDING TO PERMITS ISSUED IN 78 CITIES, JANUARY 1 TO JUNE 30, 1926, BY KIND OF BUILDING

Kind of building	Buildings for which permits were issued				
	Number	Per cent of total	Estimated cost		
			Amount	Per cent of total	Average per building
<i>Residential buildings</i>					
One-family dwellings.....	78,483	42.3	\$374,929,350	25.4	\$4,777
Two-family dwellings.....	12,048	6.5	102,929,851	7.0	8,543
One-family and two-family dwellings with stores combined.....	2,056	1.1	21,117,089	1.4	10,271
Multi-family dwellings.....	6,888	3.7	367,478,406	24.9	53,351
Multi-family dwellings with stores combined.....	550	.3	31,264,464	2.1	56,844
Hotels.....	119	.1	72,661,358	4.9	610,600
Lodging houses.....	9	(¹)	329,400	(¹)	36,600
All other.....	65	(¹)	14,420,800	1.0	221,858
Total.....	100,218	54.1	985,130,718	66.8	9,830
<i>Nonresidential buildings</i>					
Amusement buildings.....	325	.2	48,689,729	3.3	149,815
Churches.....	326	.2	15,193,610	1.0	46,606
Factories and workshops.....	1,502	.8	73,019,325	5.0	48,615
Public garages.....	1,663	.9	27,937,809	1.9	16,800
Private garages.....	65,769	35.5	27,743,758	1.9	422
Service stations.....	1,318	.7	4,770,230	.3	3,619
Institutions.....	79	(¹)	14,277,980	1.0	180,734
Office buildings.....	534	.3	87,882,638	6.0	164,574
Public buildings.....	89	(¹)	9,904,652	.7	111,288
Public works and utilities.....	179	.1	17,511,186	1.2	97,828
Schools and libraries.....	279	.2	58,076,620	3.9	208,160
Sheds.....	6,027	3.3	2,673,129	.2	444
Stables and barns.....	112	.1	315,446	(¹)	2,816
Stores and warehouses.....	5,342	2.9	94,935,790	6.4	17,772
All other.....	1,584	.9	6,723,309	.5	4,245
Total.....	85,128	45.9	489,655,211	33.2	5,752
Grand total.....	185,346	100.0	1,474,785,929	100.0	7,957

¹ Less than one-tenth of 1 per cent.

The costs as shown cover the cost of the building alone and not the cost of the land on which the building is erected.

It should also be borne in mind that the buildings enumerated are those for which permits were issued and that often considerable time elapses between the time of issuing the permit and the time of the completion of the building.

Permits were issued during the six-month period ending June 30, 1926, for 78,483 one-family dwellings, or 42.3 per cent of all new buildings, in the 78 cities. The next most numerous kind of building was private garages of which there were 65,769, or 35.5 per cent of all new buildings.

The greatest expenditure for any one class of buildings was also for one-family dwellings, their cost being 25.4 per cent of the total cost of all buildings. Multi-family dwellings were a close second, however, (24.9 per cent of the total). More money was spent for multi-family dwellings and for multi-family dwellings with stores therewith (which are practically the same class of building) than for one-family dwellings. These two classes of apartment houses together account for an expenditure of \$398,742,870 as compared with \$374,929,350 for one-family dwellings. Stores and warehouses account for the

greatest expenditure of any class of nonresidential buildings, their cost being 6.4 per cent of the total amount.

Hotels cost more per building than any other class of structure, the average cost of these buildings being \$610,600. The most costly buildings in the nonresidential group were schools and libraries, an average expenditure of \$208,160 being shown for them. The average cost of all residential buildings was \$9,830, as compared with \$5,752 for nonresidential buildings. Excluding private garages, however, which comprise over 75 per cent of the number of all nonresidential buildings and have an average cost of only \$422, the average cost of the remaining nonresidential buildings would be \$23,860. The average cost of all new buildings, residential and nonresidential, for which permits were issued in these cities was \$7,957.

Families Provided For

TABLE 2 shows the number and per cent of families provided for by each of the different kinds of dwellings for which permits were issued in 68 identical cities in the first half of 1925 and the first half of 1926.

TABLE 2.—NUMBER AND PER CENT OF FAMILIES TO BE HOUSED IN DWELLINGS FOR WHICH PERMITS WERE ISSUED IN 68 IDENTICAL CITIES, FIRST HALF OF 1925 AND OF 1926, BY KIND OF DWELLING

Kind of dwelling	Number of buildings for which permits were issued		Families provided for			
			Number		Per cent	
	First half of 1925	First half of 1926	First half of 1925	First half of 1926	First half of 1925	First half of 1926
One-family dwellings.....	89,807	74,029	89,807	74,029	42.8	36.7
Two-family dwellings.....	17,616	11,864	35,232	23,728	16.8	11.8
One-family and two-family dwellings with store combined.....	2,631	2,032	4,375	3,310	2.1	1.6
Multi-family dwellings.....	6,382	6,806	74,236	94,330	35.4	46.8
Multi-family dwellings with store combined.....	720	548	6,319	6,288	3.0	3.1
Total.....	117,156	95,279	209,969	201,685	100.0	100.0

There were 201,685 families provided for by all classes of dwellings in these 68 cities in the first half of 1926 as compared with 209,969 in the first half of 1925, a decrease of 3.9 per cent. One-family dwellings which provided for 89,807 families, or 42.8 per cent of all families provided for in the first half of 1925, provided for only 74,029 families, or 36.7 per cent of all families in the first half of 1926. In striking contrast, multi-family dwellings (apartment houses) provided for only 74,236 families, or 35.4 per cent of all families in the first half of 1925, and for 94,330 families, or 46.8 per cent of all families in the first half of 1926. Two-family dwellings provided for 35,232 families in the first half of 1925, or 16.8 per cent of all families provided for during that period, and for 23,728 during the first half of 1926, or 11.8 per cent of all families provided for.

Table 3 shows the number and percentage distribution of families provided for by the different kinds of dwellings in the 65 cities from

which reports were received for the first six months of each of the years 1922 to 1926. For convenience one and two family dwellings with stores therewith have been grouped with two-family dwellings, and multi-family dwellings with stores therewith have been grouped with multi-family dwellings.

TABLE 3.—NUMBER AND PER CENT OF FAMILIES PROVIDED FOR BY THE DIFFERENT KINDS OF DWELLINGS IN 65 IDENTICAL CITIES IN THE FIRST HALF OF 1922, 1923, 1924, 1925, AND 1926

Period	Number of families provided for in—				Per cent of families provided for in—		
	One-family dwellings	Two-family dwellings ¹	Multi-family dwellings ²	All classes of dwellings	One-family dwellings	Two-family dwellings ¹	Multi-family dwellings ²
First half of—							
1922	63,892	32,351	51,006	147,249	43.4	22.0	34.6
1923	77,875	39,314	77,826	195,015	39.9	20.2	39.9
1924	82,514	50,904	60,619	203,037	40.6	25.1	34.3
1925	87,783	39,320	80,291	207,394	42.3	19.0	38.7
1926	71,818	26,727	100,201	198,746	36.1	13.4	50.4

¹ Includes one and two family dwellings with stores therewith.

² Includes multi-family dwellings with stores therewith.

In these 65 cities 198,746 families were provided with habitations in new buildings in the first half of 1926. In the same period of 1922 dwellings were provided for 147,249 families; in 1925 a high point was reached with 207,394 families provided for. The number provided for during the first half of 1926 was smaller than during the like period in either 1924 or 1925, and is the first time that a decrease from a preceding year has been shown.

The total number of families accommodated this year fell below the 1924 mark, the number of families provided for in one-family dwellings fell below the 1923 one-family total, and the percentage of one-family dwellings is this year the smallest for the five-year period. The number of families provided for in multi-family dwellings in these 65 cities increased to 100,201 during the first half of 1926, showing a large increase over 1925 even though the total number of families provided for in all classes of dwellings had shown a decrease. Multi-family dwellings during the first six months of 1926 provided for more than half of the total number of families housed in new dwellings during this period. This is the largest percentage ever shown in a like period for any class of dwelling. The next highest percentage being that of 43.4 for one-family dwellings in 1922.

There were fewer families provided for in two-family dwellings during the first half of 1926 than during any like period since the beginning of the compilation of these records by the bureau. The number of families provided for in two-family dwellings reached the peak in the first half of 1924, when 50,904 families, or 25.1 per cent of the total, were provided for in this class of dwelling.

Comparing the first half of 1922 with the first half of 1926, there is an increase of 12.4 per cent in the number of families provided for in one-family dwellings, a decrease of 17.4 per cent in the number provided for in two-family dwellings, an increase of 96.4 per cent in

the number for multi-family dwellings, and an increase of 35 per cent in the number provided for in all classes of dwellings.

Trend of Building, 1925 and 1926

TABLE 4 shows the number and cost of each of the different kinds of buildings for the 68 identical cities from which reports were received in the first half of 1925 and 1926 and the percentage of increase or decrease in the number and in the cost in the first half of 1926 as compared with the first half of 1925.

TABLE 4.—NUMBER AND COST OF BUILDINGS FOR WHICH PERMITS WERE ISSUED IN 68 IDENTICAL CITIES, FIRST HALF OF 1925 AND 1926, BY KIND OF BUILDING

Kind of building	Buildings for which permits were issued				Per cent of increase (+) or decrease (-), first half of 1926 as compared with first half of 1925	
	First half of 1925		First half of 1926			
	Number	Cost	Number	Cost	Number	Cost
<i>Residential buildings</i>						
One-family dwellings.....	89,807	\$408,306,932	74,029	\$358,406,583	-17.6	-12.2
Two-family dwellings.....	17,616	149,506,800	11,864	101,752,005	-32.7	-32.0
One and two-family dwellings with stores combined.....	2,631	28,222,081	2,032	20,863,033	-22.8	-26.1
Multi-family dwellings.....	6,382	301,219,676	6,806	365,834,650	+6.6	+21.5
Multi-family dwellings with stores combined.....	720	34,255,093	548	31,234,464	-23.9	-8.8
Hotels.....	125	52,346,464	115	72,033,358	-8.0	+37.6
Lodging houses.....	4	271,000	8	325,400	+100.0	+20.1
All other.....	60	17,825,958	63	14,400,800	+5.0	-19.2
Total.....	117,345	991,954,094	95,465	964,850,293	-18.6	-2.7
<i>Nonresidential buildings</i>						
Amusement buildings.....	367	45,259,987	307	47,438,929	-16.3	+4.8
Churches.....	370	22,212,351	293	14,431,190	-20.8	-35.0
Factories and workshops.....	1,526	63,138,451	1,422	71,673,500	-6.8	+13.5
Public garages.....	1,868	37,037,550	1,609	27,400,959	-13.9	-26.0
Private garages.....	68,222	31,052,069	62,366	26,665,041	-8.6	-14.1
Service stations.....	1,452	4,528,497	1,247	4,500,915	-14.1	-6
Institutions.....	73	29,340,268	64	12,980,030	-12.3	-55.8
Office buildings.....	546	101,914,901	506	87,478,792	-7.3	-14.2
Public buildings.....	90	9,090,776	87	9,364,652	-3.3	+3.0
Public works and utilities.....	273	14,270,917	168	16,274,686	-38.5	+14.0
Schools and libraries.....	337	52,816,470	274	57,361,420	-18.7	+8.6
Sheds.....	5,841	2,480,334	5,690	2,579,007	-2.6	+4.0
Stables and barns.....	161	385,598	87	232,810	-46.0	-39.6
Stores and warehouses.....	5,330	100,413,468	5,054	92,697,023	-5.2	-7.7
All other.....	1,408	2,578,699	1,485	6,580,711	+5.5	+155.2
Total.....	87,864	516,520,271	80,659	477,650,665	-8.2	-7.5
Grand total.....	205,209	1,508,474,365	176,124	1,442,500,958	-14.2	-4.4

In the 68 cities from which reports were received for both the first half of 1925 and the first half of 1926 there was a decrease of 14.2 per cent in the total number of new buildings for which permits were issued in the first half of 1926 as compared with the corresponding period of 1925. In the estimated expenditure for all new buildings there was a decrease of 4.4 per cent. Residential buildings decreased in number at a greater rate than nonresidential buildings and at a lesser rate in estimated expenditures. There was a decrease of 18.6 per cent in the number of residential buildings and a decrease

of 2.7 per cent in the estimated expenditure for these buildings, while the number of nonresidential buildings decreased 8.2 per cent and the money spent for their construction decreased 7.5 per cent.

While the amount of money spent for amusement buildings in the 68 cities increased from \$45,259,987 in the first half of 1925 to \$47,438,929 in the first half of 1926, or 4.8 per cent, the amount spent for churches declined from \$22,212,351 to \$14,431,190, or 35 per cent. More money was spent for apartment houses, hotels, factories, public buildings, public works and utilities, and schools in the first six months of 1926 than the like period of 1925 and less for one-family dwellings, two-family dwellings, office buildings, and stores.

All classes of both nonresidential buildings (except "All other") and of residential buildings (except apartment houses, lodging houses, and "Other residential") decreased in number in the first six months of 1926 as compared with the same period of 1925.

Per Capita Expenditure for Buildings

TABLE 5 shows the per capita expenditure for new buildings, new housekeeping dwellings, additions and repairs, and for all building in each of the 78 cities for which reports were received for the first six months of 1926.

TABLE 5.—PER CAPITA EXPENDITURE FOR NEW BUILDINGS, NEW HOUSEKEEPING DWELLINGS, AND FOR ADDITIONS AND REPAIRS TO OLD BUILDINGS IN 78 CITIES, IN THE FIRST SIX MONTHS OF 1926

City and State	Estimated population July 1, 1926	Per capita expenditure for new buildings	Per capita expenditure for repairs, additions, and alterations	Total per capita expenditure for all building	Rank in per capita expenditures	Per capita expenditure for new housekeeping dwellings
Akron, Ohio.....	¹ 208,435	\$38.05	\$2.88	\$40.93	24	\$24.47
Albany, N. Y.....	119,000	104.90	11.19	116.09	2	36.99
Atlanta, Ga.....	¹ 200,616	57.51	3.56	61.07	11	15.76
Baltimore, Md.....	808,000	21.66	4.41	26.06	54	14.13
Birmingham, Ala.....	211,000	40.33	3.71	44.03	21	19.74
Boston, Mass.....	787,000	28.65	6.51	35.16	32	12.22
Bridgeport, Conn.....	¹ 143,535	9.26	1.94	11.20	73	3.86
Buffalo, N. Y.....	544,000	23.70	2.00	25.71	58	11.31
Cambridge, Mass.....	122,000	22.21	6.71	28.92	45	14.60
Camden, N. J.....	131,000	23.99	2.39	26.38	51	11.79
Canton, Ohio.....	110,000	24.86	2.58	27.43	49	16.51
Chicago, Ill.....	3,048,000	58.68	1.55	60.23	12	36.86
Cincinnati, Ohio.....	411,000	28.66	4.82	33.48	35	18.56
Cleveland, Ohio.....	900,000	34.31	2.15	36.46	28	15.31
Columbus, Ohio.....	285,000	36.07	4.87	40.94	23	26.10
Dallas, Tex.....	200,000	47.56	6.09	53.65	16	32.56
Dayton, Ohio.....	177,000	18.45	4.65	23.09	62	11.79
Denver, Colo.....	285,000	22.87	3.24	26.11	53	17.87
Des Moines, Iowa.....	146,000	18.65	.89	19.54	67	6.92
Detroit, Mich.....	¹ 290,000	70.52	4.06	74.58	8	47.43
Duluth, Minn.....	113,000	24.57	4.13	28.70	47	11.84
El Paso, Tex.....	109,000	4.58	1.47	6.05	77	2.58
Fall River, Mass.....	131,000	6.09	3.74	9.83	76	4.27
Flint, Mich.....	137,000	25.95	3.44	29.39	44	18.18
Fort Worth, Tex.....	159,000	75.46	11.76	87.23	5	32.57
Grand Rapids, Mich.....	156,000	26.47	9.86	36.33	29	19.17
Hartford, Conn.....	164,000	39.12	6.97	46.08	19	29.81
Houston, Tex.....	¹ 164,954	97.12	3.36	100.48	4	48.59
Indianapolis, Ind.....	367,000	23.28	3.52	26.80	50	14.06
Jersey City, N. J.....	318,000	24.83	1.18	26.01	55	17.59
Kansas City, Kans.....	117,000	10.75	.99	11.73	72	8.56
Kansas City, Mo.....	375,000	27.90	1.58	29.48	43	18.25
Los Angeles, Calif.....	¹ 576,673	95.30	14.23	109.53	3	56.41
Louisville, Ky.....	311,000	36.11	3.61	39.72	25	27.18
Lowell, Mass.....	¹ 110,296	2.83	2.08	4.91	78	2.31

¹ Population as of 1920 census.

² Estimated population as of July 1, 1925.

³ State census Jan. 1, 1925.

TABLE 5.—PER CAPITA EXPENDITURE FOR NEW BUILDINGS, NEW HOUSEKEEPING DWELLINGS, AND FOR ADDITIONS AND REPAIRS TO OLD BUILDINGS IN 78 CITIES, IN THE FIRST SIX MONTHS OF 1926—Continued

City and State	Estimated population July 1, 1926	Per capita expenditure for new buildings	Per capita expenditure for repairs, additions, and alterations	Total per capita expenditure for all building	Rank in per capita expenditures	Per capita expenditure for new house-keeping dwellings
Lynn, Mass.	104,000	\$19.31	\$4.83	\$24.14	59	\$13.84
Memphis, Tenn.	177,000	39.86	7.06	46.92	18	40.53
Milwaukee, Wis.	517,000	28.48	4.31	32.79	37	16.94
Minneapolis, Minn.	434,000	22.70	3.11	25.81	57	15.86
Nashville, Tenn.	137,000	17.46	3.00	20.47	66	6.82
Newark, N. J.	459,000	46.81	5.56	52.37	17	21.50
New Bedford, Mass.	¹ 119,539	10.82	1.09	11.91	71	4.73
New Haven, Conn.	182,000	25.93	2.80	28.73	46	9.37
New Orleans, La.	419,000	17.79	1.47	19.25	68	6.81
New York, N. Y.	5,924,000	80.95	5.18	86.13	6	52.36
Norfolk, Va.	174,000	8.96	1.37	10.33	74	5.11
Oakland, Calif.	261,000	53.43	5.38	58.81	13	31.68
Oklahoma City, Okla.	⁴ 104,080	29.67	1.73	31.39	40	17.46
Omaha, Nebr.	215,400	23.66	2.27	25.92	56	10.42
Paterson, N. J.	143,000	20.95	5.33	26.27	52	14.64
Philadelphia, Pa.	2,008,000	30.98	4.08	35.05	33	15.54
Pittsburgh, Pa.	637,000	27.22	4.28	31.51	39	14.23
Portland, Oreg.	² 282,383	55.45	5.66	61.11	10	40.51
Providence, R. I.	275,000	40.07	5.99	46.06	20	16.10
Reading, Pa.	114,000	23.52	5.16	28.68	48	9.59
Richmond, Va.	189,000	31.97	3.84	35.81	31	19.15
Rochester, N. Y.	321,000	31.54	5.74	37.28	27	17.39
St. Louis, Mo.	830,000	25.92	7.07	32.99	36	15.74
St. Paul, Minn.	248,000	28.41	5.46	33.87	34	21.63
Salt Lake City, Utah	133,000	20.45	1.95	22.40	64	11.37
San Antonio, Tex.	205,000	37.84	.72	38.56	26	13.69
San Diego, Calif.	110,000	79.91	6.06	85.96	7	48.44
San Francisco, Calif.	567,000	49.82	6.13	55.95	15	25.77
Scranton, Pa.	143,000	9.41	.68	10.09	75	2.50
Seattle, Wash.	¹ 315,312	51.92	6.21	58.13	14	29.85
Spokane, Wash.	109,000	12.74	3.22	15.96	70	11.13
Springfield, Mass.	145,000	28.42	2.72	31.14	41	19.43
Syracuse, N. Y.	184,000	26.11	4.60	30.71	42	16.77
Tacoma, Wash.	106,000	36.48	4.76	41.25	22	15.71
Toledo, Ohio	294,000	19.71	4.19	23.90	60	11.34
Trenton, N. J.	134,000	18.08	2.65	20.73	65	7.98
Tulsa, Okla.	133,000	19.59	3.17	22.76	63	14.43
Utica, N. Y.	103,000	22.84	1.03	23.87	61	14.89
Washington, D. C.	528,000	61.95	4.64	66.59	9	50.21
Wilmington, Del.	124,000	15.95	3.09	19.05	69	9.52
Worcester, Mass.	193,000	28.17	4.20	32.37	38	17.46
Yonkers, N. Y.	116,000	123.30	4.34	127.64	1	100.81
Youngstown, Ohio	165,000	35.75	.48	36.23	30	17.62
Total	31,577,223	46.70	4.27	50.98		28.43

¹ Population as of 1920 census.² Estimated population as of July 1, 1925.³ State census Jan. 1, 1925.⁴ Estimated population as of July 1, 1924.

The 78 cities, which according to the estimate of the Census Bureau have a population of 100,000 or over, during the first half of 1926 spent on all buildings \$50.98 for each inhabitant. Of this amount \$46.70 was for new buildings and \$4.27 for repairs.

The greatest per capita expenditure was in Yonkers, N. Y., where \$127.64 for each man, woman, and child was spent for all building during the period scheduled. The lowest per capita expenditure was in Lowell, Mass., where only \$4.91 per person was spent. New York had a per capita expenditure for all construction work of \$86.13; Chicago, \$60.23; Detroit, \$74.58; and Los Angeles, \$109.53.

Albany, Houston, Los Angeles, and Yonkers all showed an expenditure of over \$100 to each inhabitant, while El Paso, Fall River, and Lowell all spent less than \$10 per person during this period.

Housing in Relation to Population

TABLE 6 gives detailed information for building permits issued in 68 cities in the first half of 1925 and for 78 cities in the first half of 1926. Part 1 of the table gives the number and cost of each kind of dwelling, the number of families provided for by each type of house, and the ratio of families provided for to each 10,000 population. It will be noted that the ratio of families provided for is based both on the population according to the 1920 census and on the estimated or actual population for the specified year. The ratio is worked on the different bases because it is thought that some perhaps would prefer the 1920 figures, as they are in most instances the latest figures given in the census enumerations. In 1925 a census was made by the States of Iowa, Kansas, Massachusetts, New York, and Rhode Island, and in these cases the Census Bureau used the State figures. The other population figures are estimates in most cases, but are undoubtedly more nearly correct for their respective years than the 1920 census figures would be.

The 68 cities from which reports were received in the first half of 1925 provided housing for 209,969 families, or at the rate of 76.5 families to each 10,000 of population, according to the 1920 census, and of 70.1 families according to the estimated 1925 population. The 78 cities reporting for the first half of 1926 provided for 207,231 families, a ratio, according to the 1920 census, of 73.2 families to each 10,000 of population, and, according to the 1926 estimate, a ratio of 65.6 families to each 10,000 of population.

The following 13 cities provided housing for 100 or more families to each 10,000 of population during the first six months of 1926, according to the 1920 census. (The 1920 census figures are used because the Census Bureau has made no 1926 estimates for several of the cities.)

San Diego.....	231.4	New York.....	120.9
Los Angeles.....	177.9	Washington.....	117.7
Yonkers.....	167.7	Fort Worth.....	117.0
Detroit.....	151.7	Portland, Oreg.....	112.3
Houston.....	149.2	Birmingham.....	103.1
Dallas.....	136.3	Hartford.....	102.2
Oakland.....	122.2		

It will be noted that California and Texas each have three cities in this group which provided during this half year a dwelling place for over 100 families to each 10,000 of the cities' population.

Part 2 of the table shows the number and cost of nonresidential buildings in each of the cities covered.

Part 3 gives the number and cost of additions and repairs to old buildings, the grand total of the number and cost of new buildings, and repairs to old buildings, the number and cost of installations, and the rank in cost of construction in the cities reporting.

During the first half of 1926 there were 90,364 permits issued for additions and repairs to old buildings, at a cost of \$134,898,195, in

the 78 cities reporting for that period, as compared with 88,277, costing \$133,589,753, in the 68 cities during the like period of 1925.

The cities reporting issued 34,907 permits for installations for the first half of 1926, the estimated cost of which was \$19,534,750. The corresponding figures for 1925 were 36,117, and \$16,937,145.

The grand total of all new buildings, together with repairs to old buildings, was 275,710 in the first half of 1926 and 293,486 in the first half of 1925. The total estimated cost of these operations was \$1,609,684,124 in the period scheduled in 1926 and \$1,642,064,118 for the corresponding period of 1925.

Following is a list of the five leading cities for each of the periods and the total amount expended for construction work in each:

	1925	1926
New York.....	\$461, 513, 809	\$510, 263, 696
Chicago.....	204, 239, 810	183, 577, 891
Detroit.....	89, 562, 885	96, 204, 092
Philadelphia.....	85, 884, 680	70, 379, 825
Los Angeles.....	83, 175, 457	63, 161, 395

TABLE 6.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1925 AND OF 1926, BY INTENDED USE OF BUILDINGS

PART 1.—NEW RESIDENTIAL BUILDINGS

City and State	First half of each year	Housekeeping dwellings											
		One-family dwellings			Two-family dwellings			One-family and two-family dwellings with stores combined			Multi-family dwellings		
		Num-ber	Cost	Fam-ilies	Num-ber	Cost	Fam-ilies	Num-ber	Cost	Fam-ilies	Num-ber	Cost	Fam-ilies
Akron, Ohio.....	1925	1,072	\$4,957,376	1,072	112	\$1,583,250	224	3	\$22,800	3	5	\$72,660	20
Albany, N. Y.....	1926	1,041	5,036,763	1,041	55	1,284,000	110	1	10,000	3	3	64,500	21
Atlanta, Ga.....	1925	172	1,975,950	172	136	333,700	272	9	8,400	11	8	1,132,000	119
Baltimore, Md.....	1926	757	2,176,725	757	146	332,397	292	9	38,800	12	33	361,400	216
Birmingham, Ala.....	1925	630	2,465,700	630	21	365,000	42	16	69,000	16	28	313,700	170
Boston, Mass.....	1926	3,801	14,304,900	3,801	3	17,000	6	22	104,500	27	4	10,500	4
Bridgeport, Conn.....	1925	2,765	10,515,000	2,765	27	78,870	54	10	15,550	10	35	720,000	250
Buffalo, N. Y.....	1926	1,915	3,537,439	1,915	11	6,550	22	3	6,800	3	21	650,050	256
Camden, N. J.....	1925	1,529	3,479,745	1,529	490	5,251,700	980	2	19,000	3	296	547,000	248
Canton, Ohio.....	1926	332	1,975,538	332	426	4,236,750	852	1	10,000	2	139	7,673,534	1,845
Chicago, Ill.....	1925	66	272,440	66	20	134,680	40	13	214,900	26	3	3,385,000	873
Cincinnati, Ohio.....	1926	63	291,750	63	16	135,200	32	12	127,600	22	3	32,000	12
Cleveland, Ohio.....	1925	1,234	4,762,450	1,234	453	2,036,275	906	57	487,600	85	10	448,030	147
Columbus, Ohio.....	1926	803	3,282,435	803	276	1,034,470	552	55	674,225	84	30	2,068,500	432
Dallas, Tex.....	1925	16	224,500	16	85	892,940	170	1	85,870	15	18	1,241,000	331
Dayton, Ohio.....	1926	16	168,000	16	38	371,800	76	15	85,870	15	1	15,000	6
Denver, Colo.....	1925	404	1,700,800	404	15	88,400	30	142	1,804,400	142	761	48,481,700	10,665
Indianapolis, Ind.....	1926	358	1,456,100	358	3	25,000	6	167	2,519,900	232	942	64,203,400	12,745
Kansas City, Mo.....	1925	383	1,791,275	383	2,287	27,504,700	4,574	50	294,000	50	17	418,000	91
Louisville, Ky.....	1926	4,795	23,061,350	4,795	1,241	13,780,100	2,482	1	15,000	2	28	1,115,000	321
Memphis, Tenn.....	1925	3,675	24,169,850	3,675	147	1,293,200	204	1	450,000	46	210	7,515,000	1,669
Minneapolis, Minn.....	1926	908	6,069,600	908	97	1,088,000	194	28	287,500	31	54	2,186,000	456
New York, N. Y.....	1925	827	5,383,300	827	745	5,459,730	1,400	20	137,500	19	22	514,000	129
Philadelphia, Pa.....	1926	1,322	8,362,370	1,322	503	4,831,000	1,006	12	27,500	6	105	1,896,400	729
Pittsburgh, Pa.....	1925	1,104	5,899,500	1,104	198	1,585,400	396	3	444,225	21	7	162,000	54
Portland, Me.....	1926	1,228	5,775,500	1,228	247	1,907,500	494	3	27,500	6	83	2,679,750	802
San Francisco, Cal.....	1925	1,104	5,103,350	1,104	267	1,241,700	534	21	444,225	21	11	342,300	101
Seattle, Wash.....	1926	1,557	4,749,035	1,557	177	833,935	354	1	27,500	6	2	22,500	12
St. Louis, Mo.....	1925	993	2,948,810	993	87	654,900	174	1	444,225	21	2	77,700	11
St. Paul, Minn.....	1926	340	1,544,890	340	38	266,334	76	1	444,225	21	2	77,700	11
Wash. D. C.....	1925	255	1,213,968	255	38	266,334	76	1	444,225	21	2	77,700	11

[750]

[illegible]

¹ The cost of 24 one-story three-family dwellings is inseparably combined with the cost of two-family dwellings.
² The cost of 105 one-story three-family dwellings is inseparably combined with the cost of two-family dwellings.

TABLE 6.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1925 AND OF 1926, BY INTENDED USE OF BUILDINGS—Continued

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued

City and State	First half of each year	Housekeeping dwellings						Multi-family dwellings						Multi-family dwellings with stores combined					
		One-family dwellings			Two-family dwellings			One-family and two-family dwellings with stores combined			Multi-family dwellings			Multi-family dwellings with stores combined					
		Num-ber	Cost	Fam-ilies	Num-ber	Cost	Fam-ilies	Num-ber	Cost	Fam-ilies	Num-ber	Cost	Fam-ilies	Num-ber	Cost	Fam-ilies	Num-ber	Cost	Fam-ilies
New York, N. Y.:																			
The Bronx.....	1925	752	\$5,185,850	752	382	\$4,450,850	704	134	\$1,740,300	223	331	\$35,198,000	8,946	24	\$2,441,000	8,946	24	\$2,441,000	508
	1926	816	5,890,050	816	709	7,178,952	1,418	99	1,118,698	181	884	75,847,500	18,936	34	6,009,000	18,936	34	6,009,000	1,403
Brooklyn.....	1925	3,764	21,211,125	3,764	1,703	16,916,820	3,406	741	8,539,000	1,452	1,070	43,978,000	11,277			11,277			
	1926	3,010	18,602,550	3,010	1,227	11,896,700	2,454	458	5,586,000	919	1,344	64,467,000	16,902			16,902			
Manhattan.....	1925	4	365,000	4	14	288,000	28				89	34,830,000	4,306			4,306			
	1926	4	762,000	4	2	70,000	4				105	34,855,000	5,266			5,266			
Queens.....	1925	6,291	35,440,725	6,291	2,503	18,885,300	5,006	694	6,994,600	1,193	391	12,227,000	3,565			3,565			779
	1926	6,703	39,432,600	6,703	978	8,932,650	1,956	603	5,449,200	988	530	18,842,000	5,788			5,788			420
Richmond.....	1925	618	2,492,132	618	81	547,075	162	26	176,500	40		177,000	53	1	32,000	53	1	32,000	4
	1926	657	3,023,690	657	43	270,300	86	26	171,650	32	1	13,000	4			4			
Norfolk, Va.....	1925	214	900,532	214	14	42,700	28	1	10,000	1	9	163,000	89			89			
	1926	171	721,150	171	5	14,100	10	3	25,000	6	8	129,400	64			64			
Oakland, Calif.....	1925	2,464	7,922,038	2,464	127	691,195	254	32	203,686	40	102	1,569,400	610			610			158
	1926	1,813	6,094,618	1,813	89	525,665	172	12	69,142	13	73	1,230,890	536	14	349,000	536	14	349,000	108
Oklahoma City, Okla.....	1925	457	1,461,283	457	33	189,000	96	1	10,000	2	12	142,000	55	1	15,000	55	1	15,000	6
Omaha, Nebr.....	1925	1,087	4,287,395	1,087	26	235,000	52				18	483,000	160			160			
	1926	453	2,079,325	453	14	164,500	28												
Patterson, N. J.....	1925	116	630,378	116	116	821,700	232	3	34,500	4	6	71,500	16			16			
	1926	106	547,470	106	116	782,670	232	13	141,800	20	30	534,500	99	10	87,000	99	10	87,000	38
Philadelphia, Pa.....	1925	7,866	42,405,902	7,866	68	502,248	136	263	2,342,015	297	58	11,453,000	1,512			1,512			
	1926	5,322	25,542,585	5,322	31	177,010	62	165	841,630	186	30	3,890,835	1,192	6	736,165	1,192	6	736,165	75
Pittsburgh, Pa.....	1925	1,215	8,167,409	1,215	167	1,941,400	334	21	249,300	31	25	559,999	263	3	217,000	263	3	217,000	36
	1926	979	7,466,125	979	51	619,000	102	26	326,400	32	9	538,000	780			780			19
Portland, Oreg.....	1925	2,100	8,158,370	2,100	93	930,000	186				80	2,701,500	940			940			
	1926	1,841	7,883,635	1,841	60	600,340	130				73	2,955,200	172			172			
Providence, R. I.....	1925	275	2,800,000	275	129	1,900,000	258	8	170,900	32	55	1,107,000	87			87			
	1926	231	2,425,040	231	111	1,548,500	222	11	95,900	17	28	357,000	172			172			
Reading, Pa.....	1925	237	1,394,400	237				6	28,000	6	2	23,000	6	1	50,000	6	1	50,000	10
	1926	193	1,041,300	193				4	21,500	4	1	15,000	3	3	15,000	3	3	15,000	3
Richmond, Va.....	1925	707	3,328,969	707	27	189,950	54	7	47,000	8	91	2,375,150	583			583			67
	1926	566	2,914,695	566	19	134,407	38				18	570,000	190			190			

	1925	1924	1923	1922	1921	1920	1919	1918	1917	1916	1915	1914	1913	1912	1911	1910	1909	1908	1907	1906	1905	1904	1903	1902	1901	1900
Rochester, N. Y.	895	4,986,285	895	129	1,145,090	258	19	253,800	31	7	272,600	90	18	428,300	100											
St. Louis, Mo.	674	3,767,138	674	51	514,350	102	6	73,600	10	19	765,090	291	22	400,700	101											
St. Paul, Minn.	1,390	4,760,975	1,390	416	2,763,700	832	45	425,400	57	370	5,838,500	2,051	20	618,000	154											
Salt Lake City, Utah	1,105	3,898,288	1,105	376	763,100	752	39	362,050	44	322	7,049,100	3,052	18	1,251,000	421											
San Antonio, Tex.	973	5,082,210	973	59	636,570	118	5	46,800	5	30	1,499,500	415	2	120,000	27											
San Diego, Calif.	716	3,774,285	716	57	547,855	114	6	102,800	6	25	839,400	490	1	100,000	40											
San Francisco, Calif.	456	1,853,985	456	28	127,900	56				16	794,000	436														
Scranton, Pa.	302	1,162,650	302	10	47,000	20	4			6	303,000	224														
Seattle, Wash.	1,016	2,722,545	1,016	2	6,000	4				7	188,000	71														
Spokane, Wash.	870	2,909,562	870	16	88,825	52	4	9,300	4	12	298,200	200	1	41,000	30											
Springfield, Mass.	1,536	4,681,505	1,536	89	256,066	78	17	172,676	24	22	217,846	90														
Syracuse, N. Y.	2,035	8,000,473	2,035	356	2,061,350	712	17	117,100	34	252	7,010,181	2,782														
Tacoma, Wash.	1,883	8,786,217	1,883	100	1,148,650	320	5	27,000	10	170	4,501,551	2,088	5	147,900	47											
Toledo, Ohio	187	893,450	187	50	372,835	100																				
Trenton, N. J.	30	217,700	30	6	43,000	12	1	32,000	2	8	64,500	24														
Tulsa, Okla.	1,998	6,542,539	1,998							72	5,883,200	1,470														
Utica, N. Y.	1,981	6,596,985	1,981							55	2,823,900	1,822														
Washington, D. C.	1,414	1,404,800	1,414																							
Wilmington, Del.	369	1,213,269	369	273	1,707,800	546				22	1,128,000	424	1	60,000	25											
Worcester, Mass.	284	1,133,300	284	107	729,000	214				17	900,400	302	2	11,500	3											
Yonkers, N. Y.	261	1,176,080	261	86	721,500	172	9	111,000	11	9	128,000	59	2	118,000	24											
Youngstown, Ohio	363	2,298,700	363	40	421,500	80	6	48,000	9	5	169,000	77	4	192,000	41											
Total (98 cities)	346	2,253,890	346	36	277,700	73	12	267,900	19	3	503,000	121														
	536	1,321,075	536	20	152,250	40	5	46,500	7	8	325,000	103	6	157,000	22											
	666	2,742,136	666	9	62,200	18	15	128,200	20	3	105,000	32														
	643	2,654,639	643	33	55,100	65				7	184,750	81	1	15,000	3											
	301	2,187,875	301	34	298,500	68	2	30,000	2	1	10,000	4														
	235	1,069,894	235	1	10,000	2	9	188,000	15	73	9,942,500	2,278	2	117,000	21											
	309	1,004,962	309	5	29,000	10	6	119,000	10	93	11,879,000	2,779	12	1,502,000	332											
	192	1,195,090	192	1			1	6,000	1	1	65,000	18	4	30,800	12											
	2,482	16,114,040	2,482	113	1,224,075	226	2	10,700	2	1	62,000	20														
	2,021	12,983,970	2,021	60	575,800	120	3	58,000	6	99	1,799,900	394	1	50,000	12											
	201	1,117,246	201	72	852,000	144	2	9,000	2	72	1,164,000	282	1	18,000	5											
	181	1,107,879	181	41	689,300	82				38	3,188,500	521	2	135,000	23											
	376	1,789,815	376	67	537,500	134	12	85,000	14	76	6,796,800	1,156	11	1,804,000	203											
	320	1,602,135	320	15	128,400	30	13	98,500	14	15	288,000	50	2	62,000	14											
	315	2,989,808	315							8	197,600	39	2	50,000	12											
	245	2,504,100	245																							
	555	2,635,000	555																							
	472	2,432,300	472																							
	89,807	408,306,932	89,807	17,616	149,506,890	35,232	2,031	28,222,081	4,375	6,382	330,219,676	74,236	720	34,255,093	6,319											
	78,483	374,929,350	78,483	12,048	102,929,851	24,096	2,056	21,117,089	3,342	6,888	3,367,475,406	95,013	550	31,264,464	6,207											

* See notes to details.

BUILDING PERMITS IN PRINCIPAL CITIES

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Denver, Colo.	1925	2,799	256,491	280,911	108.1	99.6	3	1,173,000						1,801	10,146,600
Des Moines, Iowa	1926	1,567	126,468	285,000	61.1	55.0								846	5,092,500
Detroit, Mich.	1925	657	126,468	141,441	46.5	46.5								629	2,492,100
Duluth, Minn.	1926	292	993,678	146,000	23.1	30.0								232	1,010,800
El Paso, Tex.	1925	14,879	993,678	242,044	149.7	119.8	4	1,206,000						8,969	61,655,933
Fall River, Mass.	1926	15,076	113,000	1,200,000	151.7	116.9	10	8,605,700						8,406	70,115,423
Flint, Mich.	1926	278	98,917	113,000	28.1	24.6	1	105,000						276	1,442,919
Fort Worth, Tex.	1925	150	77,560	108,000	19.3	13.8								53	1,281,173
Grand Rapids, Mich.	1926	396	120,485	128,983	32.9	30.7								267	1,605,660
Hartford, Conn.	1925	136	91,599	131,000	11.3	10.4								93	559,850
Houston, Tex.	1926	747	106,482	137,000	69.2	46.3								630	2,490,021
Indianapolis, Ind.	1925	1,246	137,634	154,847	70.2	48.2								740	2,960,965
Jersey City, N. J.	1926	1,787	137,634	153,698	117.0	78.4	1	1,350,000						1,160	6,529,384
Kansas City, Kans.	1925	886	138,276	164,954	78.4	51.2								744	3,120,200
Kansas City, Mo.	1926	1,446	138,276	164,954	49.8	44.0								664	2,990,275
Los Angeles, Calif.	1925	1,411	138,276	164,954	102.2	86.0								378	5,375,238
Louisville, Ky.	1926	2,063	314,194	358,819	138.9	110.4	3	375,565						354	4,951,342
Lowell, Mass.	1925	2,425	208,103	315,280	48.2	45.6	4	4,649,326						1,541	6,690,886
Lynn, Mass.	1926	1,437	101,177	116,033	49.4	46.3								1,527	12,667,485
Memphis, Tenn.	1925	406	324,410	367,481	83.4	73.6								1,527	8,718,033
Milwaukee, Wis.	1926	2,302	576,673	375,000	71.0	61.4	7	2,091,000						1,527	5,445,615
Minneapolis, Minn.	1925	11,676	234,891	305,935	202.5	69.4	31	3,607,799						946	5,800,900
Nashville, Tenn.	1926	10,257	112,759	110,296	17.4	17.8	13	2,516,600						239	5,593,800
Newark, N. J.	1925	2,123	99,148	104,000	37.1	35.4								377	846,585
New Bedford, Mass.	1926	1,725	162,351	174,533	75.3	70.0	5	510,000						395	1,001,725
New Haven, Conn.	1925	1,196	457,147	509,192	86.2	79.0	7	2,091,000						2,141	12,796,950
New Orleans, La.	1926	72	380,582	425,435	44.0	39.5	13	3,607,799						1,278	7,352,550
	1925	1,725	118,342	136,220	35.1	30.5								7,890	38,513,035
	1926	348	414,524	452,513	33.0	30.3								5,998	35,048,130
	1925	1,563	121,217	119,539	37.7	34.1								1,262	12,891,510
	1926	95	162,337	178,927	36.0	32.7								1,327	8,453,950
	1925	585	387,219	414,493	35.6	33.3								153	8,728,900
	1926	1,380		418,000	26.9	24.9								60	254,300
	1925	1,042												162	1,439,250
	1926													847	4,228,230
														880	4,741,610
														991	9,769,145
														1,230	9,720,756
														1,809	8,902,070
														1,344	7,006,375
														323	1,293,265
														311	1,934,250
														616	8,042,433
														604	9,868,928
														348	3,195,000
														78	566,000
														198	2,444,000
														116	1,746,176
														845	4,365,650
														646	2,871,793

* Special census, Dec. 10, 1925.

* Special census, May 31, 1925.

* State census, Jan. 1, 1925.

* Population not estimated by Census Bureau.

TABLE 6.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1925 AND OF 1926, BY INTENDED USE OF BUILDINGS—Continued

PART 1.—NEW RESIDENTIAL BUILDINGS—Continued															
City and State	First half of each year	Total families provided for	Population of city		Ratio of families provided for to each 10,000 of population based on—		Nonhousekeeping dwellings						Total new residential dwellings		
			Census of 1920	Census estimate for year specified	Census of 1920	Census estimate for year specified	Hotels		Lodging houses		Other	Number	Cost		
							Number	Cost	Number	Cost					
New York, N. Y.: The Bronx	1925	11,198	5,650,048	{ 5,873,356 5,924,006	94.6 120.9	90.5 114.7	1	\$20,000						1,623	\$49,025,000
	1926	22,754					2	2,550,000						2,543	96,073,200
Brooklyn	1925	19,929					2	1,950,000						7,280	93,194,945
	1926	23,282					20	23,130,000			12	\$4,820,000		8,041	102,432,250
Manhattan	1925	4,338					19	35,293,000			19	7,165,500		139	63,433,000
	1926	5,274	3	35,495,000			1	10,000		149	78,145,500				
Queens	1925	16,834	2	161,000			2			9,950	77,191,125				
	1926	15,855								8,844	74,588,450				
Richmond	1925	15,577								730	3,423,727				
	1926	779								724	3,478,640				
Norfolk, Va.	1925	332	115,777	(^c)	28.7	14.4					238	1,116,232			
	1926	251			21.7						187	889,650			
Oakland, Calif.	1925	8,826	216,261	174,000	122.2	139.0	4	248,000			2,753	11,176,766			
	1926	2,642			101.2		1	35,000	3	7,900	2,004	8,042,215			
Oklahoma City, Okla.	1925	566	91,295	104,080	64.2	56.8	1	125,000			505	1,942,283			
	1926	1,290	191,601	211,763	67.8	61.3					1,131	5,005,305			
Omaha, Nebr.	1925	481			25.1	22.8					469	2,375,825			
	1926	308			27.1	26.0					241	1,558,078			
Paterson, N. J.	1925	405	135,875	141,065	36.4	34.6					276	2,095,940			
	1926	811			49.6						255	56,703,165			
Philadelphia, Pa.	1925	6,837	1,823,779	1,978,364	37.5	34.0	2	635,000	1	110,000	5,559	32,140,225			
	1926	6,837			27.5		1	450,000			1,436	12,888,919			
Pittsburgh, Pa.	1925	1,737	568,343	631,563	23.7	21.9	2	855,000	4	422,300	1,074	10,338,825			
	1926	1,995			118.7	108.6	8	1,980,000	1	75,000	2,282	13,844,870			
Portland, Oreg.	1925	3,060	268,288	282,383	112.3		1	35,000			1,975	11,475,175			
	1926	2,901			31.0	27.5	1	900,000	2	170,000	1,470	7,047,900			
Providence, R. I.	1925	737	237,695	267,918	23.4	20.3					382	4,976,500			
	1926	567			24.0	23.0					246	1,498,400			
Reading, Pa.	1925	259	107,784	112,707	18.8	17.8					199	1,092,800			
	1926	268			82.7	76.1					835	6,111,009			
Richmond, Va.	1925	1,419	171,567	186,408	46.3	42.0					604	4,619,102			
	1926	1,704									1	1,000,000			

BUILDING PERMITS IN PRINCIPAL CITIES

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City	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	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TABLE 6.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1925 AND OF 1926, BY INTENDED USE OF BUILDINGS—Continued

PART 2.—NEW NONRESIDENTIAL BUILDINGS

City and state	First half of year	Amusement and recreation places		Churches		Factories, shops, etc.		Garages (public)		Garages (private)		Gasoline and service stations		Institutions		Office buildings	
		Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost
Akron, Ohio.....	1925	7	\$767, 100	2	\$1, 200	16	\$131, 675			1, 057	\$337, 025	22	\$40, 500				
	1926			6	176, 500	11	343, 600			996	602, 816	28	114, 525			1	\$8, 000
Albany, N. Y.....	1925	2	80, 000	2		6	42, 050	8	\$100, 500	234	215, 320	28				5	5, 002, 500
	1926					8	498, 000	7	222, 700	202	175, 863	19	16, 700	1	\$36, 700		
Atlanta, Ga.....	1925	1	100, 000	10	382, 900	9	748, 822	3	34, 000	195	21, 232	8	15, 850	1		4	1, 465, 000
	1926	3	50, 500	4	99, 000	3	160, 000	6	453, 500	194	807, 000	20	57, 350	1	30, 000	7	360, 000
Baltimore, Md.....	1925	1	200, 000	9	490, 000	18	462, 000	124	437, 000	1, 810	974, 060	9	103, 000	4	1, 30, 000	3	95, 000
	1926	6	81, 000	4	275, 000	22	275, 500	3	135, 000	1, 671	14, 160	22	53, 800	1	150, 000	6	349, 000
Birmingham, Ala.....	1925	4	71, 166	9	220, 900	18	775, 960	13	159, 420	113	17, 515	13	115, 500	4	123, 500	2	494, 000
	1926	2	19, 265	11	177, 500	18	316, 243	8	137, 000	130	743, 916	17	160, 475	4	785, 000	25	1, 480, 065
Boston, Mass.....	1925	1	350, 000			11	536, 432	49	2, 890, 500	780	596, 131	12	84, 300	2	1, 020, 000	14	2, 496, 250
	1926	3	220, 000	3	275, 000	20	367, 400	23	2, 702, 000	662	48, 496	2	4, 500				
Bridgeport, Conn.....	1925	2	168, 000	1	38, 600	2	26, 500	43	32, 240	173	110, 263	3	103, 300			2	8, 500
	1926	1	6, 000	1	30, 000	4	22, 140	4	84, 800	221	584, 386	11	26, 140			5	141, 750
Buffalo, N. Y.....	1925	6	1, 800, 000	3	320, 000	19	174, 700	16	129, 600	1, 998	506, 671	78	361, 050				
	1926	6	693, 000	5	288, 800	31	1, 120, 050	15	111, 250	1, 380	135, 150	3	8, 000				
Cambridge, Mass.....	1925	1	70, 000			7	116, 000	5	434, 000	122	63, 715	3	15, 000	1	220, 000		
	1926					7	226, 400	3	106, 000	87	169, 055	6	15, 000	1	125, 000	4	604, 000
Camden, N. J.....	1925	3	670, 000	1	20, 000	19	183, 910	7	44, 300	300	217, 107	5	28, 200	2	370, 595	2	130, 000
	1926	2	48, 000	3	87, 000	27	608, 200	4	32, 500	348	110, 405						
Canton, Ohio.....	1925	15	4, 120, 000	28	4, 717, 500	131	5, 034, 850	130	3, 608, 400	4, 790	2, 132, 555	106	324, 100	5	3, 904, 000	60	12, 196, 900
	1926	16	10, 370, 000	11	771, 500	154	6, 107, 400	127	3, 360, 800	3, 287	1, 521, 110	88	324, 500	7	1, 438, 000	50	13, 696, 800
Chicago, Ill.....	1925	2	45, 000	6	490, 000	11	444, 300	17	638, 000	841	333, 885	11	73, 100	5	1, 855, 500	3	66, 000
	1926	2	1, 675, 000	6	63, 500	12	424, 500	16	185, 000	847	320, 375	20	61, 940	2	1, 200, 000		
Cincinnati, Ohio.....	1925	1	75, 000	12	962, 000	23	1, 491, 000	22	129, 076	3, 044	953, 890	36	33, 609			9	1, 348, 000
	1926	6	590, 000	6	436, 500	29	1, 266, 000	24	414, 500	2, 793	669, 600	25	16, 900	1	225, 000	14	486, 000
Cleveland, Ohio.....	1925	1	275, 000	2	87, 000	4	20, 200	2	135, 000	1, 317	416, 550	14	52, 800			3	236, 500
	1926	4	275, 000	2	87, 000	14	223, 400	1	7, 000	1, 409	433, 550	11	21, 100	1	23, 000	3	630, 000
Columbus, Ohio.....	1925	7	1, 236, 200	21	1, 103, 550	7	237, 000	22	357, 850	62	30, 683	17	59, 395			16	549, 025
	1926	3	120, 000	16	278, 750	8	57, 600	12	272, 200	19	19, 440	32	122, 750			3	386, 600
Dallas, Tex.....	1925	1	87, 000	3	761, 400	23	237, 400	12	352, 200	729	395, 230	9	42, 900				
	1926			2	146, 000	8	280, 122	13	251, 700	584	300, 974	2	7, 400				

1925	Denver, Colo.....	8	459,500	14	217,000	21	423,000	10	95,000	670	381,250	35	233,000	6	550,000	4	248,000
1926	Des Moines, Iowa.....	5	138,000	4	68,500	13	227,800	7	43,600	462	232,650	12	77,500	1	3,000	2	45,000
1925	Detroit, Mich.....	3	1,464,000	2	10,000	7	177,600	4	12,100	339	68,795	16	25,900	1	7,000	1	40,000
1925	Duluth, Minn.....	9	2,290,000	14	883,600	92	3,711,149	51	1,333,260	311	49,230	12	25,900	26	2,329,050	26	2,329,050
1926	El Paso, Tex.....	8	818,600	10	384,000	79	2,938,158	57	1,945,358	7,939	2,290,477	109	234,400	17	3,068,000	17	3,068,000
1926	Fall River, Mass.....	1	10,000	1	40,000	6	114,100	4	33,000	213	48,820	8	62,000	1	7,000	1	7,000
1925	Flint, Mich.....	1	125,000	1	70,320	1	7,000	1	3,500	36	4,400	1	1,800	6	64,380	6	64,380
1926	Fort Worth, Tex.....	2	2,250	5	81,200	8	18,580	26	32,450	184	71,475	1	3,500	1	75,000	1	75,000
1925	Grand Rapids, Mich.....	1	137,700	3	51,000	13	495,445	1	79,265	640	189,839	4	52,125	3	57,896	3	57,896
1926	Hartford, Conn.....	1	1,350,000	3	51,000	6	190,800	18	297,167	89	13,486	3	4,700	4	315,600	4	315,600
1925	Houston, Tex.....	1	18,000	3	180,200	12	78,950	10	192,500	1,021	246,635	12	89,300	1	1,000,000	1	1,000,000
1926	Indianapolis, Ind.....	2	165,359	13	367,675	17	391,579	12	236,980	5	2,775	11	17,018	2	305,000	2	305,000
1925	Jersey City, N. J.....	3	116,100	8	330,220	27	334,200	8	50,975	14	13,905	21	219,303	1	25,000	4	710,300
1926	Kansas City, Kans.....	4	103,700	8	693,250	9	246,400	12	50,975	1,492	235,764	17	46,235	1	6,000	7	94,797
1925	Kansas City, Mo.....	4	370,000	2	52,500	12	139,077	18	112,550	205	208,510	7	33,500	1	35,000	11	1,111,337
1926	Los Angeles, Calif.....	1	10,000	4	13,500	2	15,000	15	347,000	196	143,848	2	17,500	1	420,000	6	141,000
1925	Louisville, Ky.....	2	49,000	8	302,000	13	440,000	4	102,000	363	78,350	8	54,000	4	900,908	4	900,908
1926	Lowell, Mass.....	3	130,500	1	50,000	1	1,000	4	13,050	157	26,385	4	9,000	1	150,000	1	150,000
1925	Lynn, Mass.....	2	9,350	1	12,000	4	29,200	4	41,200	96	62,435	4	18,200	3	53,850	3	53,850
1926	Memphis, Tenn.....	2	44,200	9	366,350	4	115,700	1	32,500	178	62,435	4	18,200	4	740,600	4	740,600
1925	Milwaukee, Wis.....	1	14,300	3	128,400	4	362,050	1	32,500	626	170,950	14	92,950	2	332,800	2	36,400
1926	Minneapolis, Minn.....	4	206,000	2	200,000	13	213,000	7	308,000	680	276,500	4	17,550	2	332,800	7	151,200
1925	Nashville, Tenn.....	2	225,000	6	322,000	13	496,600	6	255,000	1,531	858,919	29	60,400	1	300,000	6	461,200
1926	Newark, N. J.....	1	36,000	4	143,600	15	257,900	28	331,500	1,510	415,365	50	100,450	1	17,000	10	708,200
1925	New Bedford, Mass.....	1	200,000	3	58,000	9	210,050	17	198,995	1,426	354,910	26	66,900	1	2,177,500	7	616,350
1926	New Haven, Conn.....	1	600,000	3	70,000	9	482,610	4	60,000	62	6,130	4	21,500	18	2,177,500	18	2,177,500
1925	New Orleans, La.....	5	1,374,000	11	104,700	10	64,000	7	61,500	97	9,965	11	36,450	20	3,083,000	20	3,083,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	702	687,437	6	33,650	35	3,424,576	35	3,424,576
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1925		5	85,950	3	72,500	8	71,800	9	51,250	10	413,600	5	28,000	1	100,000	2	170,000
1926		5	85,950	3	72,												

TABLE 6.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1925 AND OF 1924, BY INTENDED USE OF BUILDINGS—Continued

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Continued

City and state	First half of each year	Amusement and recreation places		Churches		Factories, shops, etc.		Garages (public)		Garages (private)		Gasoline and service stations		Institutions		Office buildings	
		Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost
New York, N. Y.:																	
The Bronx	1925	16	\$2,213,500	19	\$783,200	59	\$1,283,137	75	\$2,530,550	576	\$430,139	18	\$164,255			7	\$288,000
	1924	24	2,949,250	7	825,000	71	2,963,500	51	2,023,000	518	438,679	13	19,460			7	286,300
Brooklyn	1925	32	5,333,000	13	860,000	141	4,282,735	87	2,292,900	2,810	4,015,567	21	24,028			7	5,349,000
	1924	30	3,651,000	18	1,348,000	92	4,770,300	84	963,100	2,780	1,890,700	20	25,000			16	4,084,000
Manhattan	1925	23	5,575,000	6	445,000	44	22,420,700	66	5,936,500	127	185,568	12	20,606			29	29,507,000
	1924	18	5,240,000	3	830,000	33	25,536,000	25	2,387,000	85	23,850	7	234,650			39	17,909,200
Queens	1925	13	2,530,117	13	855,000	54	2,700,435	81	1,930,800	2,860	1,401,455	28	74,545			29	1,061,650
	1924	15	2,101,750	18	846,500	3	707,000	41	1,019,300	2,997	1,304,000	13	102,440			29	1,065,600
Richmond	1925	7	106,650	1	15,000	10	57,400	7	7,500	366	104,146	11	7,700			8	270,650
	1924	12	202,000	2	26,000	26	1,163,000	6	48,500	334	103,753	7	15,500			7	77,620
Norfolk, Va.	1925			4	43,500	2	2,300	5	5,900	240	37,937	5	13,714			1	26,000
	1924	2	9,500	3	34,000	3	51,000	1	1,500	208	33,010	6	13,714				
Oakland, Calif.	1925	7	537,036	1	1,300	42	350,504	11	193,573	2,020	537,879	38	60,327			7	1,455,750
	1924	4	84,414	5	60,600	27	178,080	3	73,000	1,006	473,340	29	61,300			1	400,000
Oklahoma City, Okla.	1925	2	29,250	4	275,000	6	58,530	6	172,000	445	138,684	9	18,000			2	225,000
	1924	4	236,550	1	4,000	8	17,000	3	28,000	279	90,156	13	32,150			5	1,122,650
Omaha, Nebr.	1925	5	696,000	1	25,000	6	47,500	6	89,000	136	340,953	19	65,300			2	302,000
	1924	2	501,425	1	35,000	7	204,000	1	2,000	20	14,225	1	200			3	51,000
Patterson, N. J.	1925	1	2,000			8	58,900	76	117,573	175	167,386	8	82,525			3	230,125
	1924	11	388,200	6	648,650	79	2,130,520	119	1,611,637	1,197	2,530,945	4	76,363			25	4,398,300
Philadelphia, Pa.	1925	6	746,500	12	671,550	70	4,736,925	43	1,317,000	906	2,016,235					29	4,924,850
	1924	5	1,688,000	1	276,000	32	421,730	36	320,500	1,102	723,397					3	3,200
Pittsburgh, Pa.	1925	3	168,400	8	738,000	28	835,250	6	470,000	901	559,381					6	485,000
	1924	10	400,000	7	284,300	21	578,000	58	1,435,050	2,343	411,495					6	1,708,800
Portland, Ore.	1925	6	652,000	5	300,000	8	97,000	47	1,024,300	2,049	346,115					4	656,000
	1924	1	100,000	2	215,000	15	277,100	17	588,000	677	700,990					10	373,100
Providence, R. I.	1925	1	2,760,600	1	200,000	8	207,300	65	207,800	440	481,000					13	419,800
	1924	2	50,944			6	77,800	3	50,500	221	173,000					2	316,000
Reading, Pa.	1925			5	183,276	13	400,400	6	36,600	212	164,025					6	902,500
	1924	1	52,500	2	13,700	7	184,180	2	14,500	274	128,648					3	55,742
Richmond, Va.	1925					16	722,667	4	38,500	208	108,748						

TABLE 6.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1925 AND OF 1926, BY INTENDED USE OF BUILDINGS—Continued.

PART 2.—NEW NONRESIDENTIAL BUILDINGS—Continued

City and State	First half of each year	Public buildings		Public works and utilities		Schools, libraries, etc.		Sheds		Stables and barns		Stores, warehouses, etc.		All other		Total	
		Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost
Akron, Ohio.....	1925	1	—	—	—	1	\$345,000	19	\$17,460	—	—	72	\$980,560	—	—	1,174	\$2,580,620
Albany, N. Y.....	1926	—	—	—	—	2	181,000	11	11,300	—	—	45	611,545	—	—	1,093	1,967,261
Atlanta, Ga.....	1925	1	\$72,000	2	726,000	3	4,500	42	8,365	4	—	14	130,300	19	\$1,645	1,356	715,205
Baltimore, Md.....	1925	1	30,000	3	139,340	5	1,205,000	6	1,265	—	—	5	161,500	—	—	258	8,081,528
Birmingham, Ala.....	1925	5	1,070,000	2	270,000	3	136,606	84	25,834	—	—	62	673,125	—	—	382	2,694,163
Boston, Mass.....	1925	2	35,000	5	731,000	6	1,099,000	95	46,027	—	—	86	378,340	—	—	421	8,376,555
Bridgeport, Conn.....	1925	—	—	1	2,500	3	730,000	58	3,965	—	—	57	276,000	—	—	2,106	5,357,965
Buffalo, N. Y.....	1925	—	—	1	100,000	12	869,331	105	63,080	—	—	35	798,000	—	—	1,885	5,431,170
Cambridge, Mass.....	1925	2	503,198	3	25,650	3	192,267	18	7,465	2	\$1,400	38	856,685	—	—	249	3,595,777
Camden, N. J.....	1925	—	—	—	—	3	192,267	50	17,403	2	8,150	90	1,001,502	—	—	338	2,719,845
Canton, Ohio.....	1925	1	150,000	1	75,000	—	—	198	141,815	1	10,000	72	1,345,500	—	—	1,155	8,612,703
Chicago, Ill.....	1925	—	—	1	25,000	5	691,000	152	77,445	2	5,200	100	1,753,600	—	—	1,017	10,513,326
Cincinnati, Ohio.....	1925	—	—	—	—	2	350,000	12	15,195	—	—	17	798,824	—	—	253	1,177,355
Cleveland, Ohio.....	1925	—	—	—	—	4	810,000	10	7,774	1	800	19	48,115	—	—	207	773,892
Columbus, Ohio.....	1925	—	—	—	—	—	—	57	7,380	—	—	53	1,705,395	—	—	2,172	5,005,801
Dallas, Tex.....	1925	—	—	—	—	—	—	50	51,322	—	—	34	1,906,115	—	—	1,605	6,442,456
Dayton, Ohio.....	1925	—	—	—	—	—	—	12	5,190	—	—	12	536,300	—	—	162	1,304,640
Denver, Colo.....	1925	—	—	—	—	7	53,803	7	1,525	1	900	15	219,300	—	—	131	928,643
—	1925	—	—	—	—	1	189,575	2	4,500	1	500	7	59,140	—	—	353	2,375,030
—	1925	—	—	—	—	1	26,000	—	—	—	—	6	157,425	—	—	400	1,596,825
—	1925	—	—	—	—	—	—	24	3,030	1	200	15	199,950	—	—	456	69,077,700
—	1925	5	163,300	36	914,945	25	10,907,000	225	106,300	14	14,550	276	20,933,300	—	—	5,835	60,443,270
—	1925	2	80,000	19	296,800	21	12,268,000	263	540,500	2	10,200	354	9,435,160	4	222,500	4,415	60,112,445
—	1925	—	—	9	115,700	8	981,000	25	20,095	5	7,500	42	1,022,365	—	—	955	6,112,445
—	1925	—	—	—	—	1	35,500	45	8,460	—	—	31	277,600	—	—	982	4,151,375
—	1925	1	1,100,000	—	—	7	652,500	500	200,000	—	—	155	2,210,850	—	—	3,810	9,155,925
—	1925	—	—	5	9,186,000	7	1,757,000	804	246,750	4	1,800	249	2,846,950	—	—	3,966	17,938,000
—	1925	1	30,000	1	3,350	3	410,000	51	34,500	2	8,450	31	1,132,000	2	102,000	1,432	2,806,450
—	1925	—	—	—	—	—	—	46	30,550	—	—	56	984,600	—	—	1,546	2,692,200
—	1925	—	—	—	—	—	—	—	—	—	—	173	3,304,447	—	—	310	6,352,125
—	1925	—	—	—	—	—	—	—	—	—	—	99	3,864,775	—	—	305	2,998,530
—	1925	—	—	3	667,100	1	375,000	46	47,950	—	—	7	38,900	—	—	630	1,058,500
—	1925	2	2,000	—	—	—	—	31	16,454	1	15,000	—	—	—	—	—	—

1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	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¹² Included with sheds.

¹¹ Includes stables and barns.

TABLE 3.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1925 AND OF 1924, BY INTENDED USE OF BUILDINGS—Continued

City and State	First half of each year	Public buildings		Public works and utilities		Schools, libraries, etc.		Sheds		Stables and barns		Stores, warehouses, etc.		All other		Total	
		Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost	Num-ber	Cost
New York, N. Y.:																	
The Bronx	1925	8	\$3,405,000			4	\$150,000	95	\$39,889	2	\$995	97	\$2,336,200			976	\$13,614,885
	1926	5	245,000			7	845,000	343	63,070			79	1,816,000			1,133	12,488,059
Brooklyn	1925	4	407,000			6	800,000			4	1,485	203	2,083,700			3,722	26,076,115
	1926	13	2,755,000			3	850,000			4	1,500	98	1,064,650			3,547	21,669,580
Manhattan	1925	9	776,000			4	1,410,000					39	5,981,500			3,392	85,265,874
	1926	2	86,000			4	2,745,000					38	14,949,500			277	71,258,818
Queens	1925	2	95,000			10	2,400,000	49	140,950	2	2,000	235	2,917,220			3,492	17,357,339
	1926	1	2,500			8	1,481,000	26	15,505	6	49,300	38	14,949,500			2,547	16,556,626
Richmond	1925	1	2,900			3	635,000	19	13,150	4	875	70	412,025			583	2,204,806
	1926	3	345,000			1	806,000	20	23,060	4	2,900	83	106,475			597	2,799,367
Norfolk, Va.	1925	1	3,700			3	6,000	29	7,690	8	7,700	15	61,750			325	220,622
	1926	2	67,025			2	331,000	20	4,130	6	510	6	107,767			238	669,356
Oakland, Calif.	1925	5	103,887			15	372,433	6	15,250	5	20,000	127	1,072,622			2,388	5,053,718
	1926	1	13,000			11	1,522,657	22	23,950	3	16,900	70	1,620,418			1,811	5,304,069
Oklahoma City, Okla.	1925					1	5,200	12	5,750			48	310,900			536	1,145,334
	1926					4	715,800	6	1,525	1	200	70	373,575			387	2,818,006
Omaha, Nebr.	1925					1	776,700	6	1,220			64	347,900			261	2,720,288
	1926					2	4,025	2	5,025			28	249,560			69	1,662,970
Paterson, N. J.	1925									4	54,800	39	182,075			316	899,911
	1926					8	4,418,555	100	150,205	9	59,900	82	2,254,835			1,644	19,780,860
Philadelphia, Pa.	1925	1	1,908,800			5	5,422,505			1	1,000	129	3,537,415			1,353	30,057,710
	1926	1	86,000			9	954,876	34	7,025			62	1,776,732			1,305	7,416,390
Pittsburgh, Pa.	1925					7	2,426,954	35	4,430			60	1,286,750			1,066	7,001,865
	1926					9	1,138,590	195	105,390			77	835,050			2,782	7,651,700
Portland, Oreg.	1925	8	90,085			3	295,000	158	56,030			81	536,050			2,395	4,185,145
	1926	5	291,800			3	255,000	47	8,500	1	300	61	572,200			894	3,408,900
Providence, R. I.	1925	3	50,000			2	300,000	55	39,200	2	1,200	68	715,000			678	6,043,800
	1926					1	300,000	16	2,650			42	73,000			296	1,079,144
Reading, Pa.	1925					3	934,700	7	78,016	1	800	12	51,175			259	1,588,425
	1926							276	89,282			70	698,710			653	2,326,272
Richmond, Va.	1925							238	89,282			54	267,226			321	1,423,921
	1926																
Rochester, N. Y.	1925	1	320,231			2	180,000	51	55,982			34	310,590			1,476	6,808,504
	1926	1	16,000			5	135,800	37	24,095			218	3,267,000			10	1,045
St. Louis, Mo.	1925	1	30,000			6	206,700	796	141,144			20	14,775			34	11,508,130
	1926																

1925	Rochester, N. Y.	1	320,231	2	180,000	2	84,938	51	55,982	34	310,590	5	575	1,470	6,308,594
1926	St. Louis, Mo.	1	16,000	5	206,700	5	135,830	37	24,935	20	641,581	10	1,045	1,198	4,541,130
1925	St. Paul, Minn.	1	30,000	4	70,000	4	264,530	363	141,144	218	3,267,040	34	14,775	2,740	11,568,907
1926	Salt Lake City, Utah	3	4,900,000	7	699,263	7	699,263	10	1,000	174	2,031,636	160	469,868	3,007	7,068,907
1925	San Antonio, Tex.	1	14,480	1	39,000	1	282,000	8	178,535	23	4,080,040	1	89,600	1,143	8,056,886
1926	San Diego, Calif.	2	61,000	2	395,300	2	1,004,962	21	7,090	27	1,521,100	1	1,000	1,112	1,106,182
1925	San Francisco, Calif.	3	132,441	3	71,650	3	1,458,908	11	24,360	99	1,417,351	52	19,400	296	3,049,707
1926	Scranton, Pa.	2	81,750	3	71,650	3	1,300,000	11	24,360	95	1,409,625	48	350	324	7,162,544
1925	Seattle, Wash.	6	46,700	2	182,000	2	182,000	267	75,405	1	62,000	71	1,000	308	12,404,266
1926	Spokane, Wash.	1	125,000	1	23,000	1	881,000	292	42,155	130	1,645,115	1	1,000	357	2,443,003
1925	Springfield, Mass.	1	5,750	1	60,000	1	37,449	28	3,500	120	1,046,900	1	1,000	1,708	3,629,705
1926	Syracuse, N. Y.	4	121,500	1	100,000	1	275,000	11	25,680	22	161,575	9	174,140	1,607	6,368,425
1925	Tacoma, Wash.	2	22,700	2	900,000	2	620,372	12	22,650	33	575,025	25	702,100	630	4,600,869
1926	Toledo, Ohio	1	22,700	1	5,000	1	440,845	2	230	30	399,250	16	3,065	528	175,508
1925	Trenton, N. J.	1	5,000	1	5,000	1	75,898	55	4,877	33	160,000	1	1,200	709	4,072,065
1926	Tulsa, Okla.	1	500,000	1	10,000	1	1,023,594	103	23,372	55	363,670	7	4,050	585	1,303,525
1925	Utica, N. Y.	2	54,478	1	10,000	1	1,010,193	35	23,756	3	21,200	1	1,200	194	819,075
1926	Washington, D. C.	1	10,673	1	10,000	1	1,010,193	58	16,930	96	2,089,245	9	60,900	1,512	6,745,816
1925	Wilmington, Del.	1	22,700	1	50,000	1	448,605	34	9,145	64	1,767,664	2	2,100	1,341	5,154,249
1926	Worcester, Mass.	1	44,000	1	69,570	1	150,000	6	3,250	9	20,040	13	8,035	241	823,762
1925	Yonkers, N. Y.	1	10,000	3	25,950	4	183,730	44	5,010	19	305,015	13	8,035	503	797,749
1926	Youngstown, Ohio	1	50,000	1	50,000	2	900,000	59	5,288	20	571,990	19	121,310	499	2,409,690
1925		1	50,000	1	50,000	2	900,000	9	2,845	37	483,850	15	4,395	491	2,068,093
1926		1	50,000	1	50,000	2	900,000	9	5,079	29	382,800	12	8,979	332	4,393,649
1925		1	50,000	1	50,000	2	900,000	10	4,500	9	110,000	10	10,000	345	2,517,914
1926		1	50,000	1	50,000	2	900,000	9	4,500	21	525,000	10	15,000	611	749,590
1925		90	9,090,776	273	14,270,917	337	52,816,470	5,841	2,480,334	5,330	100,413,408	1,408	2,578,699	87,864	516,520,271
1926	Total (98 cities)	89	9,904,632	179	17,511,186	279	58,076,620	6,027	2,673,129	5,342	94,935,790	1,584	6,723,309	85,128	489,655,211

* See notes to details.

TABLE 6.—NUMBER AND ESTIMATED COST OF BUILDINGS (NEW CONSTRUCTION, AND REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS) COVERED BY PERMITS ISSUED IN THE FIRST HALF OF 1925 AND OF 1926, BY INTENDED USE OF BUILDINGS—Continued

PART 3.—REPAIRS, ALTERATIONS, AND ADDITIONS TO OLD BUILDINGS, AND GRAND TOTAL OF ALL PERMITS

City and State	First half of each year	Repairs, etc., on residential buildings ¹			Repairs, etc., on nonresidential buildings ²			Total repairs, etc.			Grand total of all permits for new construction and repairs, etc.			Rank in cost of construction	Installation permits		Alterations that changed family accommodations
		Housekeeping dwellings		Nonhousekeeping dwellings	Number	Cost	Number	Cost	Number	Cost	Number	Cost	Number		Cost		
		Number	Cost														
Akron, Ohio.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Albany, N. Y.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Atlanta, Ga.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Baltimore, Md.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Birmingham, Ala.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Boston, Mass.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Bridgeport, Conn.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Buffalo, N. Y.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cambridge, Mass.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Camden, N. J.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Canton, Ohio.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Chicago, Ill.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cincinnati, Ohio.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Cleveland, Ohio.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Columbus, Ohio.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dallas, Tex.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Dayton, Ohio.....	1925	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....

1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	2911	2912	2913	2914	2915	2916	2917	2918	2919	2920	2921	2922	2923	2924	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Educational Campaign for Better Housing and Home Making¹

BETTER Homes in America, an educational organization of whose board of directors Herbert Hoover is president, while President Coolidge is chairman of the advisory council, announces that since the inception of its work each year has seen an increase in the number of local committees dealing with the problem of bringing good houses within reach of wage-earning families. The committees may undertake the remodeling of old houses for this purpose or the building of new, but the limitation of expense is kept well to the front.

The median price of houses demonstrated by our committees was reduced from \$5,660 in 1923 to \$4,694 in 1925. From the returns so far available for 1926 it would appear that the median cost has this year been still further reduced to approximately \$3,700; in any case, well under \$4,000.

The general plan of the organization's work is to form local committees, which conduct educational campaigns as to the possibilities of attractive and healthful housing at prices varying with the different classes whose needs are to be met. Demonstration houses are erected, or old, ugly, or inconvenient houses are remodeled into comfortable and satisfactory homes. Intelligence and skill are applied to the questions of utilizing space so as to obtain the most in the way of convenience and utility for a given amount spent in construction. Kitchens and dining rooms, stairs and passages and entries and such closets and shelving as may be included, are carefully planned to reduce the work of the housewife; and model rooms are furnished to show how to get the best effects from whatever amount may be devoted to furnishing. To help in this matter, the organization publishes a plan book of small houses, prepared by the Architects' Small House Service Bureau, while another pamphlet, prepared by members of the Department of Commerce, discusses in clear and nontechnical language the problem of financing the building or buying of a house, and gives the uninitiated person an idea of how to set about securing a home of his own.

An interesting study published by the organization deals with the school-practice houses and home-economics cottages throughout the country. In the practice houses a group of home-economics students actually live and carry on the home-making activities characteristic of any home. The home-economics cottage is a house in which much of the home-economics work is carried on, but which does not have students in residence. Reports were received concerning 77 school-practice houses in 37 States and 57 home-economics cottages in 17 States and the Philippine Islands. The practice houses vary widely in size, equipment, and cost, but the cheapest are designed to contain all the essentials for a comfortable, healthful, and dignified home life. Often the home is built by student labor, and when completed may be used to furnish training for both sexes. This is especially useful in coeducational institutions.

Furniture, for example, may be made by students and the repair of the house may also be taken care of by the boys under the direction of vocational teachers. Some of the schools are now developing courses in home mechanics under shop courses. Tasks are assigned to students in such courses that would be typical in the maintenance of any home.

¹Better Homes in America (Inc.). Washington, D. C., Publication, 1924-1926. 1926.

The group in residence usually remains from 6 to 10 weeks, and during that time carries on such activities as cooking, cleaning, table setting, table serving, budget making, buying, and household management. In 16 of the 77 houses a child is kept in residence to give an opportunity for study and practice in caring for babies.

The home-economics cottage is a less ambitious enterprise, but has fully as wide a field of usefulness. There are some 200 of them in the United States, largely located in rural communities or in small cities. Here they serve as demonstration centers for the whole neighborhood.

The school cottages in small communities have an excellent opportunity to assist local families to new housing standards and to inform them of the use of labor-saving devices, short cuts in household work, and up-to-date methods in household operation and care. * * * In some of the little towns in Virginia where these cottages are located practically every housewife in the community is entirely familiar with the work that goes on there.

Dwellers in Furnished Rooms

THE "furnished room" is a development of modern urban life. Its prevalence and its evil effects, individually and socially, are discussed in a paper by Harvey W. Zorbaugh, of the Ohio Wesleyan University, published in the *American Journal of Sociology* for July, 1926.

The article is based on a survey of the rooming houses on the lower north side of Chicago. In this district there were 1,139 rooming houses, in which 23,007 people were living. An intensive study of 90 blocks in the better rooming area north of Chicago Avenue revealed the fact that 71 per cent of all the houses in this district took roomers, and that of the people who live in these rooms 52 per cent are single men, 10 per cent single women, and 38 per cent are "couples." Of the "couples" approximately 60 per cent were living together unmarried.

The rooming-house population, the writer points out, is typically what the labor unionist refers to as the "white-collar" group—men and women in clerical work of all sorts. There are few mechanics or manual laborers. The area, moreover, is essentially childless, although most of the inhabitants are in the productive ages of life, between 20 and 35.

The "rooming house" has none of the social characteristics of the old "boarding house," with its common dining room and parlor. The boarding house has practically passed out of existence; the present survey found less than half a dozen in the lower north side district.

The roomers seldom stay long in one place. The constant shifting of population and the whole atmosphere of the houses discourages social contacts. The rooming population, the writer states, turns over every four months. This results in a complete anonymity. No one knows anyone else. There is no public opinion.

The writer points out the evil effects of this isolated, anonymous life, with its thwarting of normal emotional impulses, upon the character of the individual. Suicide is frequent, social and civic responsibility unknown. "The person tends to act without reference to social definition. Behavior is individualized—impulsive rather than social."

The group in residence usually remains from 8 to 10 weeks, and during that time carries on such activities as cooking, cleaning, table setting, table serving, budget making, buying, and household management. In 10 of the 17 houses a child is kept in residence to give an opportunity for study and play.

COOPERATION

Fifth Cooperative Congress

THE Cooperative League is to hold its fifth cooperative congress in Minneapolis November 4 to 6, 1926. It is a biennial meeting to which voting delegates are received from societies affiliated to the league and to which fraternal delegates are invited from other cooperative societies, trade-unions, educational societies, and other nonprofit organizations favorably interested in the cooperative movement.

Various subjects of interest to cooperators will be discussed, including accounting methods, educational work, relation of consumers' cooperation to mutual insurance societies, credit unions, and cooperative marketing associations, cooperative publications, etc.

Condition of Labor Banks as of June 30, 1926

THE research department of the Amalgamated Clothing Workers of America has furnished the following data showing the condition of the various labor banks on June 30, 1926. The number of banks remains the same as in the previous statement, given in the May, 1926, issue of the Labor Review, but the Labor National Bank of Jersey City is included instead of the Amalgamated Bank of Philadelphia, which was closed in March, 1926. In the six-month period the surplus and profits of the 36 banks included have increased by \$331,619, the deposits by \$9,439,053, and the total resources by \$11,320,260, or by nearly 10 per cent in each case.

CONDITION OF LABOR BANKS AS OF JUNE 30, 1926

Name and location of bank	Surplus and profits	Total deposits	Total resources
Mount Vernon Savings Bank, Washington, D. C.	\$144,208	\$4,237,408	\$4,825,216
Brotherhood of Locomotive Engineers Cooperative National Bank, Cleveland, Ohio	350,645	23,790,510	26,760,228
United Bank & Trust Co., Tucson, Ariz.	1,512	503,781	575,292
Peoples Cooperative State Bank, Hammond, Ind.	25,124	1,606,695	1,779,413
Nottingham Savings & Banking Co., Cleveland, Ohio	6,648	743,685	836,835
San Bernardino Valley Bank, San Bernardino, Calif.	33,221	1,796,215	2,065,436
Amalgamated Trust & Savings Bank, Chicago, Ill.	155,555	3,102,215	3,484,183
Transportation Brotherhoods National Bank, Minneapolis, Minn.	43,570	2,089,606	2,420,836
Amalgamated Bank of New York, New York City	197,104	7,141,584	7,746,606
Labor National Bank of Montana, Three Forks, Mont.	9,116	144,349	178,465
Federation Bank & Trust Co. of New York, New York City	967,235	15,441,485	17,805,692
Telegraphers National Bank, St. Louis, Mo.	137,026	5,860,636	6,775,801
Brotherhoods Cooperative National Bank, Spokane, Wash.	74,444	2,577,767	3,060,429
Brotherhood Savings & Trust Co., Pittsburgh, Pa.	8,467	548,097	743,049
Brotherhood of Railway Clerks National Bank, Cincinnati, Ohio	50,000	3,811,756	4,271,567
Brotherhood of Locomotive Engineers Cooperative Trust Co., New York City ¹	269,255	5,314,633	6,894,418
United Labor Bank & Trust Co., Indianapolis, Ind.	13,521	782,830	1,025,223
International Union Bank, New York City	205,500	3,561,546	4,069,086
First National Bank in Bakersfield, Calif.	31,972	1,376,612	1,508,584
Labor National Bank, Great Falls, Mont.	14,147	439,024	553,392
Farmers & Workmen's Savings Bank, Jackson, Mich.	15,205	764,127	880,712
Peoples National Bank of Los Angeles, Calif. ²	70,000	3,192,675	3,878,102
Brotherhood of Locomotive Engineers National Bank, Boston, Mass.	66,141	3,436,789	4,129,929
Labor Cooperative National Bank, Paterson, N. J.	100,000	3,781,897	4,244,473
Brotherhood State Bank, Kansas City, Kans.	13,457	658,966	772,424
Brotherhood Cooperative National Bank of Portland, Oreg.	50,000	1,875,126	2,327,205
Brotherhood of Locomotive Engineers Bank & Trust Co., Birmingham, Ala. ³	72,578	1,419,874	1,998,590
Brotherhood State Bank, Hillyard, Spokane, Wash.	5,662	190,423	221,417
Brotherhood of Locomotive Engineers Title & Trust Co., Philadelphia, Pa.	252,623	1,134,074	1,891,705
Labor Cooperative National Bank, Newark, N. J. ⁴	125,000	2,119,437	2,544,732
Brotherhood Cooperative National Bank, Tacoma, Wash.	40,000	2,492,184	2,929,339
The American Bank, Toledo, Ohio	50,000	509,947	761,393
Brotherhood Bank & Trust Co., Seattle, Wash.	41,663	886,689	1,178,352
Labor Bank & Trust Co., Houston, Tex.	10,372	325,741	436,114
Hawkins County Bank, Rogersville, Tenn. ⁵	58,561	507,155	615,716
Labor National Bank of Jersey City, N. J.	69,882	419,039	714,364
Total (36 banks)	3,799,422	108,584,597	126,849,318

¹ Brotherhood of Locomotive Engineers purchased Terminal Exchange Branch of Hudson Trust, which was taken over by Empire Trust Co. July 9, 1924. Terminal Exchange Branch with resources about \$3,000,000 legally became part of Brotherhood of Locomotive Engineers Cooperative Trust Co. Oct. 19, 1924.

² People's Mortgage Co. is controlled in conjunction with this bank.

³ Statement of condition as of Mar. 12, 1926.

⁴ Statement of condition as of June 23, 1926.

⁵ Statement of condition as of Apr. 12, 1926.

Cooperation in Foreign Countries

Greece

THE cooperative movement in Greece dates from only about the year 1911, according to the July 19, 1926, issue of Industrial and Labor Information. Since that time, however, the development has been rapid, and at the beginning of 1925 there were 3,655 such societies, distributed according to type as follows:

	Rural	Urban
Credit societies.....	2,064	26
Purchase societies.....	193	27
Marketing societies.....	138	--
Productive societies.....	138	446
Consumers' societies.....	---	105
Building societies.....	---	243
Miscellaneous societies.....	218	7
Total.....	2,801	854

Norway

DATA given in the August, 1926, issue of the International Cooperative Bulletin show that the 1925 sales of the societies affiliated with the Union of Norwegian Consumers' Societies (the N. K. L.) amounted to 135,580,192 kroner,¹ and resulted in a net gain of 5,518,600 kroner. Purchase dividends on the year's business amounted to 3,080,300 kroner. These societies now have a share capital aggregating 10,852,600 kroner and reserves of 9,839,200 kroner. They operate 103 productive enterprises and employ 2,269 persons, of whom 333 are employed in the productive departments.

Palestine ²

ON AUGUST 31, 1925, there were in Palestine 90 registered societies and about 40 others not registered but functioning as cooperative societies, of which 35 were workers' productive societies. The registered societies include the following:

	Number
Housing societies.....	42
Credit unions.....	21
Agricultural societies.....	9
Industrial societies.....	6
Agricultural settlements.....	4
Consumers' societies.....	2
Marketing societies.....	2
Central organizations.....	4

The membership of 19 of the credit unions is 10,911 and of 7 of the agricultural societies for which this information is available is 639.

¹ Krone at par—26.8 cents; exchange rate in 1925 about 18 cents.

² Industrial and Labor Information (Geneva), July 19, 1926.

As is evident, the housing societies form the largest group, but many of these societies, it is explained, do not have their own equipment nor supply their own materials but obtain these from the Solel Boneh, a central organization which is described as "a kind of central building contractor with distinct social tendencies in regard to the scale of wages, hours of labor, and division of profits."

It subcontracts most of its work among contractors and Kvutzoth (cooperative groups or workmen's artels), who can also work for private building firms and only a part of whom are permanently connected with it. The permanent staff of the Solel Boneh is made up exclusively of the technical and administrative staff (engineers, consulting engineers, architects, foremen, etc.).

The outstanding cooperative feature is the practice of leaving the fixing of the scales of wages and other conditions of labor in the hands of a commission consisting of representatives from labor groups. The terms, however, are not supposed to be higher or better than those prevailing in the general building market.

The administration of the Solel Boneh is in the hands of nine persons, of whom three or four (now three) are selected to actually administer the affairs of the organization, each of these having equal power. This committee of management supervises the work of the head office in Tel-Aviv and of the branches in Jerusalem, Haifa, and Tiberias, makes bids for contracts, which it can either accept or reject, purchases raw material and machinery, and is empowered to engage and dismiss personnel.

In the execution of its work the Solel Boneh makes use of the three methods given below according to circumstances:

(1) The Solel Boneh assigns the work to a building cooperative and retains for itself a commission of 10 per cent of the entire amount of the contract. The Solel Boneh supplies all the equipment and the raw material, but holds the group responsible for this raw material. The group assumes responsibility for the division of the work among its members, provision of compensation, and the completion of the work according to specifications.

(2) The Solel Boneh awards the contracts to a building group, but fixes the rate of compensation for the individual members. The group, however, is responsible for the building materials turned over to it; that is, it is not to use less than the amount turned over, and if it uses more it does so at its own cost. In this case, too, the division of the work among the members is left for the group.

(3) The Solel Boneh distributes the work and materials among the group as well as fixing the rate of compensation. This form is used in the case of larger contracts where more than one group is engaged in a particular job.

The Solel Boneh has three kinds of share capital: Membership shares, preference shares, and founders' shares. The 10 founders' shares are now in the hands of the Federation of Jewish Labor and they have a voting power equal to all the members' shares. The statutes provide that the profits shall be divided not among the members but among the holders of the preference shares up to a maximum of 6 per cent, the balance among workmen's institutions.

Poland ³

THE Polish Cooperative Wholesale Society (V. D. P.) had sales in 1925 amounting to 544,852,947 zlotys,⁴ a slight increase over 1924. Of this sum, 511,959,566 zlotys' worth of goods (94 per cent of the total) were supplied to affiliated societies and the remainder represented goods sold to public institutions and exports. Goods manufactured by the wholesale itself were valued at 90,142,659 zlotys, or 17 per cent of the total sales. These manufactures include mill products, coffee, meats, foodstuffs and household requisites, chemical products, and clothing. During 1925 the wholesale opened

³ International Cooperative Bulletin (London), August, 1926.

⁴ Zloty at par=19.3 cents; exchange rate in 1925 about 17.85 cents.

a new chicory factory and a new modern chemical laboratory; it also purchased another flour mill, raising the capacity of mills owned by it to 320 tons per day. A large meat-packing plant has been built and a central warehouse and another meat-packing plant are in process of construction. The wholesale employs 932 workers, of whom 396 are in the productive departments.

In 1925, "V. D. P. remained at the head of the wholesale enterprises concerned with the production of foodstuffs in the Czechoslovak Republic."

The share capital of the society amounts to 17,210,144 zlotys reserves to 14,790,212 zlotys, and savings deposits of members to 6,885,760 zlotys. The net profit for the year amounted to 140,682 zlotys, all of which was placed in the reserves.

The administration of the V. D. P. is in the hands of nine persons, of whom three or four (any three) are selected to actually administer the affairs of the organization, each of these having equal power. This committee of management supervises the work of the head office in Tel-Aviv and of the branches in Jerusalem, Haifa, and Tiberias, makes bids for contracts, which it can either accept or reject, purchases raw material and machinery, and is empowered to engage and dismiss personnel.

In the execution of its work the V. D. P. makes use of the same methods as are followed according to circumstances:

(1) The V. D. P. assigns the work to a building cooperative and retains a commission of 10 per cent of the entire amount of the contract. The V. D. P. supplies all the equipment and the raw material, but holds the group responsible for the raw material. The group assumes responsibility for the completion of the work among its members, provision of compensation, and the completion of the work according to specifications.

(2) The V. D. P. awards the contract to a building group, but takes the work of supervision for the individual members. The group, however, is responsible for the building materials turned over to it; that is, it is not to use less than the amount turned over, and it is responsible for the work done. In the case of a division of the work among the members in the building group, the V. D. P. distributes the work and materials among the group as it wishes, and the rate of compensation. This form is used in the case of larger contracts where more than one group is engaged in a particular job.

The V. D. P. has three kinds of share capital: Membership shares, preference shares, and founders' shares. The 10 founders' shares are now in the hands of the Federation of Jewish Labor and they have a voting power equal to all the members' shares. The statutes provide that the profits shall be divided not among the members but among the holders of the preference shares up to a maximum of 6 per cent; the balance among workers' institutions.

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International Cooperative Publishing (London), August, 1926.
Zloty at par=19.3 cents; exchange rate in 1925 about 17.50 cents.

LABOR LAWS AND COURT DECISIONS

Assuming the Risk of an Insanitary Work Place

HOW far an employer may go in permitting insanitary conditions without liability for the results to his employees is suggested by a recent decision by the New York Supreme Court, Appellate Division (*Wager v. White Star Candy Co.*, 217 New York Supplement, 173). Frances E. Wager worked for the candy company "in a damp, unsanitary, unventilated cellar from June, 1924, until October, 1924; from October, 1924, to December, 1924, she was required to work in a first-floor room which was not properly heated; she was subjected to drafts, contracted a hacking cough, and became incapacitated." Physicians testified that the plaintiff was suffering from tuberculosis, the disease being "directly attributable to the plaintiff's surroundings during her working hours."

The trial court gave a verdict of \$2,000, from which appeal was taken on the ground that the employee's sole remedy was the workmen's compensation act. The court rejected this contention on the ground that this law applies only to accidental injuries, so that in the absence of an accident no recovery could be had thereunder. However, in the absence of an accident, the common-law right would survive. Nevertheless the plaintiff was held by this court not entitled to recover damages, Judge Henry T. Kellogg, speaking for the court, saying:

The plaintiff was fully aware of the conditions under which she worked, and continued in the employment from June to December in spite of such knowledge. It is from her testimony that we learn that the walls of the cellar were wet to the touch; that a cesspool backed up liquids which wet the floor; that the cellar was devoid of windows to light or air it; that dead rats were left about; that the odors were vile; that no fires were kept in the upstairs room; that the plaintiff worked in a drafty place; that the upstairs room was damp. It is common knowledge that such conditions are deleterious to health. The plaintiff was chargeable with such knowledge. We think that the plaintiff, as a matter of law, assumed the risk attendant upon her remaining in the employment, and that the recovery may not stand.

The laws of New York direct that all factories and other work places "be so constructed, equipped, arranged, operated, and conducted as to provide reasonable and adequate protection to the lives, health, and safety of all persons employed therein" (Con. L., ch. 31, sec. 200); that "every part of a factory building and of the premises thereof and plumbing therein, shall at all times be kept in a safe and sanitary condition and in proper repair" (*ib.*, sec. 291); that "every workroom in a factory shall be provided with proper and sufficient means of ventilation, natural or mechanical, or both, as may be necessary, and there shall be maintained therein a proper and sufficient ventilation and proper degrees of temperature and humidity at all times during working hours" (*ib.*, sec. 299).

The question naturally arises as to the status of an employer who so completely ignores such statutory provisions as those set forth above as the opinion in the *Wager* case indicates. An act of 1921, now chapter 74, Con. L., declares that an employee assumes only "the necessary risks of the occupation or employment, 'including those risks, and those only, inherent in the nature of the business which

remain after the employer has exercised due care in providing for the safety of the employees, and has complied with the laws affecting or regulating such business or occupation for the greater safety of such employees" (sec. 4).

The only case cited by Judge Kellogg is *Berry v. Atlantic White Lead & Linseed Oil Co.* (1898), 30 App. Div. 205, 51 N. Y. Supp. 602. Here an employer testified that instructions had been given the plaintiff workman as to the dangers of the work, and safety devices (not required by law) supplied, though the workman denied having received the warning. The court found in favor of the employer on the evidence, and held that the risk had been assumed, defeating recovery. This case would find support in a somewhat earlier decision of the court of appeals (*Knisley v. Pratt* (1896), 148 N. Y. 372, 42 N. E. 986), where a girl losing an arm on account of unguarded cogs was denied damages because of her continuance at work with a knowledge of the conditions, though the law specifically required such cogs to be guarded. It was there said that "the statute does, indeed, contemplate the protection of a certain class of laborers, but it does not deprive them of their free agency and the right to manage their own affairs." Her power to waive the protection of the statute and "accept employment subject to the rule of obvious risks" was, therefore maintained as based on "legal principles that are salutary and proper in the general administration of justice"; so that, though "it is impossible not to feel great sympathy for this unfortunate plaintiff, who has been maimed for life," she was held to have chosen her course, and no damages were recoverable.

This ruling clearly reduced the factory law to a negligible thesis, so far as liability for injuries was concerned, and the court found itself constrained to reverse its position in a later case (*Fitzwater v. Warren* (1912), 206 N. Y. 655, 99 N. E. 1042), in which it was said: "Where an employer deliberately fails to comply with a statute, the courts should be loath, except in a very clear case, to hold that the employee assumes the risk of his master's violation of the law. Otherwise the beneficent results sought to be obtained by the statute will fail to be realized"; and added that the then current movement for compensation for injuries not due to the employer's fault was "in no small measure due to the tendency evinced at times by the courts to relieve the master, though concededly at fault, from liability to his employee on the theory that the latter assumed the risk of the master's fault."

Granting the correctness of this statement, it would seem timely, in view of the decision of Judge Kellogg, unless it should be reversed by a higher court, to extend the compensation system to all injuries due to employment, whether occasioned by accident or not.

Compulsory Road-Work Law of Nicaragua

IN THE *Gaceta Oficial* of Nicaragua for April 30, 1926, a new road-conscription law was published which requires all male inhabitants of the Republic, native or foreign, over 18 years of age, to contribute to the construction and maintenance of highways. Departmental highway boards will register all male residents and exact the highway-service tax in either so many days of labor or in cash payment, graduated according to the earning capacity of the individual.

INDUSTRIAL DISPUTES

Study of Strikes in China from 1918 to 1925

By TA CHEN, ASSISTANT PROFESSOR OF SOCIOLOGY, TSING HUA COLLEGE,
PEKING

OVER two years ago, when the writer commenced to collect facts about strikes in China, he soon became aware of the great dearth of data on the subject. The strike as a method for improving the workers' condition is still new in China, and social organizations have not taken much interest in studying the strike problem scientifically. Although labor is rapidly becoming an important social question in China, few economists and sociologists give it due emphasis in their writings. Under these circumstances the writer was forced to adopt a method of gathering information which had never before been used in China. Seventeen newspapers were selected in important industrial and commercial centers in the country (Peking, Tientsin, Fengtien, Shanghai, Hankow, Hangchow, and Canton), and from these news items and reports about strikes were taken. Owing to occasional interruption of communication and transportation in parts of China, the delivery of 5 of these papers has been somewhat irregular, but that of the other 12 has since August, 1923, been quite regular. The information for the period between 1918 and 1923, is almost entirely based upon one Shanghai daily—the Shun Pao—which is the oldest newspaper printed in the Chinese language, its publication having begun in 1872.

Newspaper reports are not very reliable, but the fact must be borne in mind that as yet no adequate agency for collecting strike data exists in China. Also, reliability is a relative term and some newspaper accounts are apparently dependable. It is not claimed that the growing labor movement in China is realistically portrayed in this study, but it is believed that some light may be shed upon the present social situation. It might be mentioned that material used by the writer for an article in the *Monthly Labor Review* on the shipping strike in Hongkong in 1922 was drawn from a number of sources other than newspapers. It was later found that the Shun Pao published 103 news items about the Hongkong shipping strike, and a comparison of these with the earlier article in the *Review* revealed only minor discrepancies. Again, it may be pertinent to mention that in 1925 the writer was on the Commission on Social Research, of which Dr. Royal Meeker, formerly United States Commissioner of Labor Statistics, was a member. This commission visited important places in China and thereby enabled the writer to check the strike material derived from the newspapers.

Number of Strikes and Strikers

THIS study covers 698 strikes in the eight-year period from 1918 to 1925, including 135 strikes arising directly from the May 30 incident in Shanghai in 1925. Disregarding, for the present, this incident, it thus appears that between 1918 and 1925 there were 563 strikes, or an average of 70.4 per year.

Of the total number of strikes, in 43.9 per cent the number of strikers was reported. For the whole period the total number of the strikers in reported cases was 892,219, the average number of persons per strike being 3,612. If the May 30, 1925, strikes are included, the average number of workers involved per strike was 3,724.

The duration of the strike was reported in 47.4 per cent of the cases (including the May 30, 1925, affair), the average duration of those reported upon being 6.8 days not including the May 30, 1925, strikes and 11.5 days including those strikes. Table 1 shows the details regarding the number of strikes and strikers and duration of strikes, by years. The figures for the May 30, 1925, strikes are given in parentheses.

TABLE 1.—NUMBER OF STRIKES AND STRIKERS AND DURATION OF STRIKE, BY YEARS, 1918 TO 1925

[Figures in parentheses include the May 30, 1925, affair in Shanghai]

Year	Total number of strikes	Strikes for which number of strikers was reported	Total number of strikers	Average number of strikers per dispute	Strikes for which duration was reported	Total number of days lost	Average duration of strike (days)
1918.....	25	12	6,455	538	15	124	8.27
1919.....	66	26	91,520	3,520	52	294	5.65
1920.....	46	19	46,140	2,428	22	157	7.14
1921.....	49	22	103,025	4,910	21	155	7.38
1922.....	91	30	139,050	4,635	54	452	8.37
1923.....	47	17	35,835	2,108	21	134	6.38
1924.....	56	18	61,860	3,437	26	241	9.27
1925.....	183	103	403,334	3,916	95	595	6.32
	(318)	(198)	(784,821)	(3,964)	(120)	(2,206)	(18.88)
Total.....	563	247	892,219	3,612	306	2,062	6.74
	(698)	(342)	(1,273,706)	(3,724)	(331)	(3,823)	(11.52)
Annual average.....	70	31	111,527	-----	38	258	-----
	(87)	(43)	(159,213)	-----	(41)	(478)	-----

Classification of Industries

TABLE 2 classifies the strikes by industries. By far the largest number occurred in the textile trades.

TABLE 2.—CLASSIFICATION OF STRIKES ACCORDING TO INDUSTRY AND YEAR OF OCCURRENCE, 1918 TO 1925

[Figures in parentheses include the May 30, 1925, affair in Shanghai]

Year	Textile trades	Foods and food-stuffs	Household goods	Construction and building	Tool-making and manufacturing	Communication and transportation	Basic industries	Educational enterprises	Personal hygiene and public health	Ornaments and luxuries	Miscellaneous	Total
1918	8	1	5	2	3	3			2	1		25
1919	13	3	6	3	13	15	2	3	1	2	5	66
1920	16	3	2	3	10	2	1	1	1	3	4	46
1921	10	7		4	1	13	1	1	4	3	5	49
1922	26	6	1	3	7	22	5	3	8	4	6	91
1923	8	6	1	3	3	14	4	1	2	2	3	47
1924	13	8	1	3	6	13		2	3	3	4	56
1925	73	11	7	9	8	30	7	14	3	6	15	183
	(105)	(25)	(12)	(15)	(27)	(42)	(9)	(20)	(10)	(11)	(42)	(318)
Total	167 (199)	45 (59)	23 (28)	30 (36)	51 (70)	112 (124)	20 (22)	25 (31)	24 (31)	24 (29)	42 (69)	563 (698)
Annual average	21 (25)	6 (7)	3 (4)	4 (5)	6 (9)	14 (16)	3 (3)	3 (4)	3 (4)	3 (4)	5 (9)	70 (87)

Principal Causes of Strikes

IN TABLE 3 the strikes covered by this study are analyzed by principal causes as far as information is available. Many of the terms are self-explanatory. The others may be briefly explained as follows:

High cost of living.—Thus, 200 pounds of polished rice in Shanghai were sold for \$7.78¹ in 1916; in 1923 the cost increased to \$12.45. For the same period and in the same city the price of one picul (133½ pounds) of potatoes increased from \$2.09 to \$3.40. Wages are usually paid in copper coins, which have in recent times shown great depreciation. In Peking a silver dollar could be changed for 195 coppers in August, 1923; one year later the number was increased to 229, thus gaining 34 coppers on the dollar in a single year. Then, too, the workers' struggle for life is made severer by a keener competition. For instance, the ricksha pullers find it more difficult to earn a living on account of the gradual introduction of the automobile bus service and the street car in some cities.

Popular movements.—This group of causes is peculiar to the Chinese workers, being without parallel in western countries. Patriotic demonstrations in recent years are often associated with demonstrations against foreign aggression and oppression, and against foreign interference with Chinese political, economic, and social questions. Of this type was the popular agitation for the return of Shantung to China as a result of the Versailles treaty in 1919, and the May 30 affair in Shanghai in 1925. As to the new-thought movements it is

¹ Chinese dollar at par = 54.04 cents; exchange rate varies.

often asserted that a large number of the strikes in recent times have been instigated by outside influence, including communistic propaganda, but it is extremely difficult to gather facts to substantiate this allegation. Undoubtedly the Chinese proletariat has been and is still somewhat influenced by radical teachings and also by moderately socialistic teachings, but clear cases are rather rare.

Right to organize unions.—Among the rank and file of labor to-day there is a growing consciousness of the inadequacy of the guild system to meet the changing conditions of economic and social life in China. A movement to organize the workers along the lines of modern trade-unionism is therefore on foot. The industrial union is gradually becoming popular, as the workers see the practical benefit of organizing the workmen in the same industry to strengthen the power of collective bargaining and to facilitate strikes. The labor union is still uncommon, for the organization of laborers regardless of skill, industry, and trade is a relatively new idea to many workers in China. Besides, in case of seasonal, casual, or woman labor, organization is even more difficult. Demands for the right to organize unions divide into demands for (a) the right to organize a friendly club or a union; (b) its recognition by the management if and when organized; (c) its right to recommend laborers to the management; and (d) the right of their group to negotiate with the management on matters relating to their welfare.

Outside conflicts include conflicts with the police, the military, or political groups.

Table 3 classifies the strikes reported, by causes and by years.

TABLE 3.—CLASSIFICATION OF STRIKES BY CAUSE AND BY YEARS OF OCCURRENCE, 1918 TO 1925

[Figures in parentheses include the May 30, 1925, affair in Shanghai]

Cause	1918	1919	1920	1921	1922	1923	1924	1925	Total
Economic pressure:									
High cost of living.....	2	3	16	18	1	1	4	11 (11)	56 (56)
Wage increase.....	13	18	15	12	50	23	24	78 (79)	233 (234)
Increase in fees.....		1		1	6	2	4	4 (4)	18 (18)
Increase in taxes.....		1	1	2	1	2	2	2 (2)	11 (11)
Wage deduction.....					3			9 (9)	12 (12)
Treatment of labor:									
Working hours.....		2	1	1				3 (3)	7 (7)
Maltreatment.....	1		3	3	4	1	4	27 (27)	43 (43)
Change of working conditions.....	2	2	3		2		1	4 (4)	14 (14)
Policy of employer.....	1	1			1		2	11 (11)	16 (16)
Foreman.....	3	2		4	3	1	1	7 (7)	21 (21)
Tips, bonuses, etc.....			4	1	2	2	1		10 (10)
Popular movements:									
Patriotic demonstrations.....		35			1	1		2 (136)	39 (173)
New-thought movements.....							1	5 (5)	6 (6)
Right to organize unions.....					4	2		4 (4)	10 (10)
Outside conflicts.....				3	3	3	2	4 (4)	15 (15)
Sympathetic strikes.....				1	2	2	1		6 (6)
Miscellaneous.....	3	1	2	3	3	4	7	11 (11)	34 (34)
Cause unknown.....			1		5	3	2	1 (1)	12 (12)
Total.....	25	66	46	49	91	47	56	183 (318)	563 (698)

Methods of Mediation

SOME strikes are of a simple nature, so when the management explains the situation to the strikers they are willing to come to terms. In more complicated cases the strikers hold meetings

to elect representatives and to present demands to the employers. Similarly, the employers may hold meetings to discuss methods of dealing with the strikers. Representatives may then be elected from the management and strikers to hold joint meetings for mediation and conciliation.

But if both the management and the strikers feel it best to ask their parties to form an arbitration body the following may be so invited: Local officials, chamber of commerce, officers of own guild or union, officers of disinterested guild or general union, and disinterested individuals. The statement below shows the number of strikes in which specified methods of mediation were made use of; the figures in parentheses include strikes arising from the May 30 incident.

Strike settled by—	Number of strikes
Persuasion and settlement by management.....	58 (59)
Mass meeting of strikers.....	62 (63)
Meeting of employers.....	31 (31)
Joint meeting of representatives of employers and strikers.....	85 (92)
Arbitration by—	
Local officials.....	75 (79)
Chambers of commerce.....	18 (30)
Own guild or union.....	49 (49)
Disinterested guild or general union.....	11 (13)
Disinterested individuals.....	33 (44)

Conduct of Strikes

IN ONLY 181 cases of the number for which data were secured has any disorder occurred. The details are given in the statement below; figures in parentheses include the strikes arising from the May 30 episode:

	Number of strikes
Injury to persons.....	19 (22)
Destruction of property.....	22 (22)
Personal injury and property damage.....	2 (2)
Police to maintain order and to make arrests.....	89 (92)
Military body to maintain order and to make arrests.....	20 (20)
Foreign police to maintain order and to make arrests.....	21 (23)

Settlement of Strikes

TABLE 5, showing details of settlement of strikes, by causes, also shows the character of settlement. Strikes are here regarded as successful when the strikers gained at least 60 per cent of their demands, except that in the case of strikes for wage increases a gain of 25 per cent of the wage demands is regarded as a successful strike. Partially successful strikes are those where some part of the strikers' demands were granted, but this part was less than the percentages just referred to.

TABLE 4.—SETTLEMENT OF STRIKES CLASSIFIED BY CAUSES, FOR PERIOD 1918-1925

[Figures in parentheses include the May 30, 1925, affair in Shanghai]

Cause of strike	Number of strikes	Results of strikes							
		Successful		Partially successful		Failure		Terms unknown	
		Number	Per cent	Number	Per cent	Number	Per cent	Number	Per cent
Economic pressure:									
High cost of living.....	56	31	55.4			1	1.8	24	42.9
Wage increase.....	233 (234)	117 (118)	50.2 (50.4)	17 (17)	7.3 (7.3)	14 (14)	6.0 (6.0)	85 (85)	36.5 (36.3)
Increase of fees.....	18	7	38.9	4	22.2	2	11.1	5	27.8
Increase of taxes.....	11	3	27.3	2	18.2	1	9.1	5	45.5
Wage deduction.....	12	10	83.3	1	8.3			1	8.3
Total.....	330 (331)	168 (169)	50.9 (51.1)	24 (24)	7.3 (7.3)	18 (18)	5.5 (5.4)	120 (120)	36.4 (36.3)
Treatment of labor:									
Working hours.....	7	1	14.3	1	14.3	2	28.6	3	42.9
Mistreatment.....	43	25	58.1			2	4.7	16	37.2
Change of working conditions.....	14	4	28.6	2	14.3	1	7.1	7	50.0
Policy of employer.....	16	8	50.0	1	6.3			7	43.8
Foreman.....	21	8	38.1	4	19.1	4	19.1	5	23.8
Tips, bonuses, etc.....	10	4	40.0			3	30.0	3	30.0
Total.....	111	50	45.0	8	7.2	12	10.8	41	36.9
Popular movements:									
Patriotic demonstrations.....	39 (173)	36 (36)	92.3 (20.8)	1 (36)	2.6 (20.8)			2 (100)	5.1 (57.8)
New thought movement.....	6	1	16.7			3	50.0	2	33.3
Total.....	45 (179)	37 (37)	82.2 (20.8)	1 (36)	2.2 (20.2)	3 (4)	6.7 (2.3)	4 (102)	8.9 (56.7)
Right to organize unions:									
Outside conflict.....	10	7	70.0			3	30.0		
Sympathetic strikes.....	15	8	53.3					7	46.7
Miscellaneous.....	6	3	50.0					3	50.0
Cause unknown.....	34	10	29.4	3	8.8	4	11.8	17	50.0
Total.....	563 (608)	283 (284)	50.3 (40.7)	36 (71)	6.4 (10.2)	40 (41)	7.1 (5.9)	204 (302)	36.2 (43.3)

Analysis of Significant Strikes

FROM the foregoing it is evident that the strike phenomenon in China is quite complicated and that the brief notes accompanying the statistical tables may be insufficient to explain the economic and social background. Therefore, it seems desirable to illustrate the several strike causes listed by a brief analysis of certain of the more significant strikes.

Strikes Due to Economic Pressure

Japanese cotton mills strike, Shanghai

In 1919 Kiangsu Province and the lower Yangtse region suffered a shortage of rice production. The situation was made worse by the export of rice to Japan. In Shanghai and vicinity the price of staple foods increased rapidly, which worked hardship among the working classes. On June 20, 1920, some 4,000 Chinese employees of three Japanese cotton mills at the Yang-shih-poo district in Shanghai

struck for an increase of \$1 per month. In a disturbance which arose during the strike building equipment and electric fixtures were destroyed. After prolonged negotiations, a final decision was reached in July, the company agreeing to sell to each mill hand 30 per cent of a picul of rice each month at a fixed price of \$8 per picul until conditions returned to normal.

Ricksha coolie strike, Hankow

The chief place of business of ricksha pullers is located in one part of Hankow City. When automobile bus service was started there to compete with them over 8,000 ricksha coolies declared a strike on September 15, 1924, in the course of which property of the automobile company was destroyed and considerable injury caused. A settlement was reached between the city police and the union which included the prohibition of the bus service and the restoration of carriages and rickshas.

Cloth factories strike, Hangchow

Attempting to relieve the effects of business depression following the World War, the employers of the cloth factories of Hangchow in February, 1925, proposed to cut wages from 90 cents to 70 cents per day. This the workers resisted. The police were called out and arrests were made, but the employees stood firm, and the employers finally agreed to reduce wages only to 80 cents a day and promised to raise them again as soon as local conditions improved.

Strikes Due to Alleged Maltreatment

Japanese cotton mills strike in Tsingtao

In recent years the Chinese workers in several Japanese mills in Tsingtao have been discontented, and this feeling increased when the management interfered with their unions and resorted to compulsory examination of the workers and of their lodging houses. Early in April the workers held a mass meeting and formulated the following demands: (1) A maximum of 10 hours for day work and of 8 for night work; (2) free rent; (3) an annual bonus; (4) one month's leave each year; (5) wage increase of 10 cents (Japanese) per worker per day. The management refused the above demands and the employees called another meeting, demanding: (1) The recognition of the union; (2) an increase of 30 per cent in wages for contract labor; (3) the doubling of the rice allowance and the abolition of the deposit required by the company as security; (4) free medical treatment for injuries, with full pay during incapacity; (5) a lunch period of one hour; (6) the abolition of flogging; (7) one month's leave before and after childbirth for female employees; (8) the eight-hour day for child workers; (9) disciplinary measures to be approved by the union and fines imposed upon the laborers to be used for their education; (10) no worker to be dismissed for insufficient cause. As the company refused to consider these demands, the workers, on April 19, declared a strike. Four days later the owners expressed their willingness to agree to sell flour to the employees at reduced rates, to give them 15 minutes a day in addition to 30 minutes for the

noonday meal, and to allow a wage increase of 10 cents (Japanese) a day.

Under these conditions the workers seemed to be willing to resume work. But suddenly the Chinese employees of two other Japanese mills joined the strike, increasing the number to about 10,000, and the situation became more serious. The Japanese owners decided to close down the mills and offered to give travel fee to those laborers who wanted to return home, and a considerable number of them availed themselves of this privilege. Public opinion in Tsingtao was evidently in favor of the strikers. After April 26 the strike gradually got beyond the control of the labor leaders and the provincial authorities of Shantung deemed it necessary to arrest intimidating pickets and to suppress the activities of the strike committee. Negotiations were carried on between the Chinese chamber of commerce at Tsingtao and the Japanese consulate, to which were also admitted representatives of the mill owners and the strikers. The terms of settlement arrived at May 9, 1925, include (1) better treatment, (2) increase of 10 cents (Japanese) per day per worker, (3) medical care for the injured, with full pay during incapacity, (4) a 30-minute lunch period with a 10-minute interval of rest at 3 a. m. and 3 p. m. daily, (5) the abolition of flogging, and (6) just disciplinary measures for the workers.

Strike in plant of Sino-Japanese Cotton Manufacturing Co., Shanghai

Hoping to increase the output of cotton yarn, the Japanese manager of the Sino-Japanese Cotton Manufacturing Co. proposed to introduce the hank system for counting the skeins of cotton yarn, which meant a change of wage payment from the time basis to the piece basis. The woman employees of the plant opposed the change and on February 8, 1925, more than 600 workers struck. The strikers went to the Japanese consulate and presented demands for the dismissal of Japanese foremen because of the flogging frequently inflicted upon the workers, the maintenance of the time system of wage payment, and that the bobbin girls should continue in their employment. The strike ended on February 15. The Chinese police authorities acted as mediators and ruled that the time system should prevail, but that if the workers' output exceeded the daily requirement he should receive additional pay according to the number of hanks produced.

Commercial Press strike in Shanghai

On August 14, 1925, it was rumored that the Commercial Press Co. contemplated dismissing a considerable number of employees. The truth of this rumor seemed evident when 16 workers were dismissed, followed immediately by the dismissal of 3 more. This created panic among the rank and file of labor. Workers' delegates interviewed the management but received no satisfactory explanation regarding the dismissals, whereupon more than 3,000 men walked out on August 22, demanding the reinstatement of the dismissed workers, a declaration by the company that future dismissals should be for cause only, the enforcement of a former labor agreement, that there should be no increase of hours of work for night workers, and

a wage increase of 20 cents per worker per day. The company called a meeting of the directors, who expressed a willingness to adopt peaceful means for settling the strike. The members of the emergency committee of the Shanghai Defense Army consented to be arbiters. These called in representatives of capital and labor and an agreement was reached on August 27, 1925, by which the company gave \$15,000 to be distributed among the dismissed, the workers received wages for three days during the strike, and the workers' resolutions above outlined were to be given consideration.

Popular Movements and Patriotic Demonstrations

The May 30, 1925, affair in Shanghai²

The May 30, 1925, incident in Shanghai and its later developments will go down to posterity as one of the interracial tragedies of modern times. Its causes have remote and immediate origins. The International Settlement of Shanghai is governed by a municipal council whose members are of British, American, and Japanese nationalities, with the British predominating. Of the population of about 1,000,000 some 22,000 are foreigners, the rest being Chinese. The Chinese have no representation on the council, although perhaps over 90 per cent of the taxes are collected from them. Racial antipathy and discrimination have been common; but the immediate cause of the May 30 episode was socio-economic. Labor conditions in the city have been unsatisfactory. An ordinary factory laborer works about 12 hours a day and receives not more than 50 cents. These earnings are not sufficient to meet the increasing cost of living. Consequently, on May 4, 1925, the Chinese workmen of the Naigai Cotton Mills of Japanese ownership struck for an increase of wages. On May 15 a sympathetic strike was declared by the Chinese employees in five other mills and the management of a seventh mill shut down the plant to avoid trouble. Dispute arose and the management opened fire, wounding more than 10 workers, 1 being fatally injured and dying soon afterwards. Indignation was at once aroused among labor organizations, student associations, and educational and commercial bodies. Popular demonstrations were held, especially on May 30, when students, artisans, laborers, and others paraded the streets in protest. A few of them were arrested by foreign police, and the demand for their release brought a large number of paraders to the municipal police station, where the police fired upon the unarmed crowd, killing 6 and wounding more than 20. The tragedy of May 30 thus began.

From this time to the end of 1925 a series of sympathetic strikes protesting the shooting of May 30 took place in various parts of China. There were altogether 135 strikes distributed among the following cities: Shanghai, 104; Peking, 8; Hankow and Tsinan, 4 each; Tsingtao, Kaifeng, Chiocho, and Nanking, 2 each; Fengtien, Tientsin, Chenkiang, Suikowsan, Kongmoon, and Swatow, 1 each; Canton-Hongkong, 1. Classified by industries these strikes fell into 11 categories: (a) Textile trades, 32; (b) food industries, 14; (c) household goods industries, 6; (d) construction and building, 6; (e)

² With some change, the material of the May 30, 1925, incident is extracted from the writer's recent contribution to the International Labor Review, Geneva, under the title "Recent labor movement in China."

tool making and manufacturing, 18; (f) communication and transportation, 12; (g) basic industries, 2; (h) educational enterprises, 6; (i) personal hygiene and public health, 7; (j) ornaments and luxuries, 5; and (k) miscellaneous industries, 27. Of the 135 strikes, 94 for which the number of the strikers was reported, involved 381,387 men, or 4,057 per strike. In 25 cases the duration of the strike was reported, totaling 1,664 days, or 66.6 per strike.

In addition to the basic cause—that of protest against the massacre of May 30—these sympathetic strikes involved supplementary matters, such as demands regarding wages, hours of labor, and social treatment of the workers. As the May 30 affair proper is still pending, results from the patriotic standpoint can not yet be considered. As regards the supplementary causes, 1 strike resulted in complete success, 35 in partial success, 1 in failure, and in 98 cases the outcome was not reported. In 17 cases the right to organize labor unions was recognized, in 16 cases the workers received a subsidy for time lost during the strike in addition to an improvement of working conditions, and in 18 cases they received a wage increase.

Regarding the methods of mediation, the data are incomplete. One case was settled by the management directly, 1 by a mass meeting of the strikers, 7 cases by joint meetings of representatives of capital and labor, and 29 by arbitration—11 by disinterested individual arbitrators, 12 by chambers of commerce, 4 by local officials, and 2 by the federation of labor.

As regards the conduct of the strikers, the following facts were noted: In 3 cases the police were called out, in 2 cases the foreign police were called out, and in 3 cases there was injury to persons.

It is hardly feasible to outline even the most significant strikes resulting from the May 30 affair. Space will permit to describe briefly only two of the series: (a) The Peking Sewing Co. strike and (b) the Canton-Hongkong strike.

The Peking Sewing Co. strike was unique, since the workers did not declare the strike, but the management took the initiative in advising its female employees to strike on the ground that the massacre of May 30 in Shanghai was humiliating to the Chinese Nation and that all the Chinese should express their patriotism and protest foreign atrocities. On June 9, 1925, the workers stopped work and the plant was closed down, whereupon the company proceeded to destroy its sewing machines of British and Japanese make and organized the workers to parade the streets of Peking. During the strike the laborers received full pay and the company communicated with several patriotic bodies in the country to cooperate in their efforts for arousing the "national conscience" against the May 30 affair.

The Canton-Hongkong strike, which is still in progress, is the most complicated and involved of the conflicts. This strike includes workers of all the principal trades, occupations, and industries in Canton, Shameen, and Hongkong. At its most serious stage the total number affected was estimated to be in the neighborhood of 250,000 men. The strike has already been maintained for about 10 months. The initial action was taken on June 18, 1925, by the Chinese seamen on the Hongkong-Macao-Canton steamers, a British line. Three days later Chinese workmen in Hongkong and Shameen

under foreign employment joined them. On June 23 students, merchants, laborers, and a small number of military cadets organized a parade in Canton numbering about 10,000 men. As soon as the majority passed Shakee Road bordering Shameen (a foreign settlement) foreign soldiers in Shameen opened fire upon the crowd, killing 1 Frenchman and 52 Chinese and wounding 117 Chinese. The Chinese in Canton became aroused and through the Canton Government demanded a satisfactory settlement.

Since September, 1925, the various authorities have become more conciliatory. Chinese laborers in foreign employ, excepting that of British and Japanese have been able to resume work under certain conditions. The strikers have proposed terms of settlement which have been revised several times. Regarding Hongkong, they propose: (1) That the Chinese in the colony shall enjoy freedom of organization, speech, publication, workers' education, and that the dissolved unions shall be restored; (2) that the Chinese shall enjoy the same legal treatment as received by other nationals in the colony and that deportation and flogging be abolished; (3) that the election law shall be revised to include the Chinese as electors; (4) that labor legislation shall be enacted providing for an eight-hour day, a minimum wage, collective agreement with the employers, abolition of contract labor, improvement of living conditions of woman and child workers, and compulsory insurance; (5) that all strikers be allowed to return to work without discrimination; (6) that all strikers receive pay for the time lost during the strike; (7) that a committee shall be formed by representatives of employers and workers to investigate losses and to recommend them to the Hongkong Government for compensation.

Regarding Shameen, the strikers' demands include: (1) That the Chinese in the settlement shall have freedom of organization, speech, and publication, the right to strike and the right of residence; (2) that all the strikers be allowed to return to work without retaliatory measures; (3) that the eight-hour day and improvement of working conditions for women and children be inaugurated; (4) that all the policemen in Shameen shall be Chinese; (5) that a committee be formed by representatives of employers and workers to investigate the losses and recommend them to the municipal authorities for compensation; and (6) that the regulations and rules of British and French consulates restricting the freedom of the Chinese be abolished. Negotiations have been going on for a considerable time but no settlement has yet been reached.

The economic losses of the Canton-Hongkong strike have been stupendous, although no accurate estimate is yet forthcoming. The total losses of the strike have been estimated at about \$2,000,000 Chinese currency per day. Taking the strike at approximately 300 days, the total losses up to the present must be about \$600,000,000 Chinese currency. Business and economic conditions have been deplorable.

The Right to Organize Labor Unions

Peking-Hankow Railway strike

In October, 1921, railway workers at Changsin-tien, Chihli Province, organized a labor school and toward the end of that year they also organized a workers' club. In April, 1922, workers' representatives from 14 stations of the railway came together to formulate a plan for organizing a labor union of the entire line. To test the strength of their growing organization, a strike was declared in August of the same year and a complete victory was scored in their favor. On January 5, 1923, workers' delegates again met at Chengchow, Honan Province, to draft the constitution of the railway union, and agreed on February 1 as the date for the official opening of the union and for the adoption of its constitution and by-laws; 130 representatives from 35 local unions were to attend the meeting in Chengchow in addition to 65 representatives of the unions of other railways and 60 representatives from newspapers and schools in other cities. But on February 1 martial law was suddenly declared in Chengchow. The union's headquarters were guarded by the armed police and the hotels and restaurants in the city were forbidden to accommodate the union's delegates. In protest the union men in the city walked out on February 4 and were soon joined by the railway workers on other sections of the same railway. Since this interfered with the operation of the railway, the police and military authorities forced the workers to resume work, on February 7, killing 3 and wounding 40 in so doing. Indignation was aroused among the rank and file of labor, and three other railways and about a half dozen railway machine shops and ironworks declared a sympathetic strike. Telegrams of sympathy were received from about 100 unions throughout the nation. In Shanghai and Peking preparations for large-scale sympathetic strikes were in progress for considerable time, but these efforts, like other sympathetic strikes, were suppressed or interfered with by local authorities. The National Parliament in Peking moved to impeach the military authorities, and at a session of "labor unrest" held in the House of Representatives four resolutions were passed stating (1) that in accordance with the provisional constitution of the Republic the Government now recognizes the right of the workers to hold meetings, (2) that the Government should release the laborers under arrest, (3) that the Government give money to the families of the deceased or wounded, and (4) that the Government remove troops and police from railway stations. But the Government adopted a rather repressive policy and took steps to suppress the strike and the activities of the strike leaders. In Peking the authorities prevented the cooperation between labor organizations and student associations and prohibited the circulation of unregistered printed matter. Outwardly the strike was a failure, for the Peking-Hankow (Kin-Han) Railway union was dissolved and the strike suppressed. As a matter of fact the indirect influence of the strike was far-reaching. The Government became awakened to the growing strength of labor organizations and devised ways and means to cope with the situation. Therefore, on February 22 a presidential mandate was issued ordering the proper ministries to draft labor

laws for the consideration of Parliament. As a result the Ministry of Agriculture and Commerce was able to promulgate on March 29 the first ministerial order on provisional factory legislation of the nation, and later drafted labor-union regulations.

Conclusions

THERE seems to be a fairly high degree of positive correlation between the frequency of strikes and industrial and commercial development of the cities. The strike is an urban phenomenon.

The three main causes of the strikes were: Economic pressure, alleged maltreatment of the workers by employers, and popular movements. Economic pressure was responsible for 58.6 per cent of the total number of strikes, not including the May 30, 1925, affair; alleged maltreatment for 19.7 per cent; and popular movements for 8 per cent.

During the eight years (including the May 30 affair) only 59 cases were settled by the efforts of the management alone. In those cases which have been mediated two general policies have been noted—joint meetings by representatives of capital and labor or arbitration by third parties. Broadly stated, the majority of the strikes have been carried on in a rather orderly manner, for in only 46 cases in eight years (including the May 30 affair) has destruction of property or injury to persons been recorded, although the number of strikes where the police or military force was called out to maintain peace has been considerably larger.

During the eight years successful strikes have constituted 50.3 per cent of the total (not including the May 30, 1925, affair); partially successful strikes, 6.4 per cent; failures, 7.1 per cent. Terms of settlement are unknown for the remaining 36.2 per cent. A conservative attitude is taken in making this classification, for a number of strikes whose terms of settlement are not clearly stated have been grouped under "settlement unknown." If the last-mentioned class is eliminated and the rest of the strikes are regrouped the results are as shown in Table 5.

TABLE 5.—RESULTS OF STRIKES DURING PERIOD 1918-1925 FOR WHICH TERMS OF SETTLEMENT ARE KNOWN

Item	Num- ber of strikes	Successful		Partially successful		Failures	
		Num- ber	Per cent	Num- ber	Per cent	Num- ber	Per cent
May 30, 1925, affair excluded.....	359	283	78.8	36	10.0	40	11.1
May 30, 1925, affair included.....	396	284	71.7	71	17.9	41	10.4

As shown by this study, strikes for the right to organize unions or for the recognition of the unions when organized began with the year 1922.

For those strikes for which data were secured on these points the number of strikers per strike each year averaged 3,612 (or 3,724, including the May 30 affair), and an average of 6.7 days (or 11.5

days, including the May 30 affair) was lost per strike. Strikes arising from the May 30 occurrence involved an average of 4,057 workers per strike and lasted, on the average, 66.6 days.

The textile trades have experienced the largest number of strikes—167 cases in eight years (or 199 cases, including the May 30 incident). Next in order comes communication and transportation with 112 cases (or 124 cases, including May 30 strikes). Basic industries have had the smallest number of strikes—20 cases in eight years (or 22 cases, including strikes arising from the May 30 occurrence).

The establishment having the largest number of strikes seems to have been the Sino-Japanese Cotton Manufacturing Co. in Shanghai. In eight years it has had 15 strikes involving the following matters: Wage demands, complaints against foremen, maltreatment or working conditions, sympathy with the student movement, demands for bonus, demands for the resumption of union activities, protest against the events of May 30, and demands that the dismissal of workers be for cause only. Three main reasons may be suggested for the frequency of the labor troubles of this company: (1) Racial ill feeling between the Japanese and the Chinese which also finds expression in the relations between capital and labor; (2) the comparatively well-organized body of Chinese workers in this mill, and the fact that some of their leaders have been active in the general labor movement in China; and (3) the present-day labor psychology in China—the workers are gradually becoming conscious of their class interest, with a consequent increase in their demands.

Conciliation Work of the Department of Labor in August, 1926

By HUGH L. KERWIN, DIRECTOR OF CONCILIATION

THE Secretary of Labor, through the Conciliation Service, exercised his good offices in connection with 41 labor disputes during August, 1926. These disputes affected a known total of 16,974 employees. The table following shows the name and location of the establishment or industry in which the dispute occurred, the nature of the dispute (whether strike or lockout or controversy not having reached strike or lockout stage), the craft or trade concerned, the cause of the dispute, its present status, the terms of settlement, the date of beginning and ending, and the number of workmen directly and indirectly affected.

On September 1, 1926, there were 52 strikes before the department for settlement and, in addition, 7 controversies which had not reached the strike stage. Total number of cases pending, 59.

Company or industry and location	Nature of controversy	Craft concerned	Cause of dispute	Present status and terms of settlement	Duration		Men involved	
					Beginning	Ending	Directly	Indirectly
Moschel Edwards, Covington, Ky.	Strike.....	Corrugated ironwork	Wages and new agreement..	Unable to adjust. Men employed elsewhere.	1926 (1)	1926 Aug. 4	23	77
Howard Theater, Washington, D.C.	Controversy..	Theater musicians	Asked union wages; \$59 per week.	Unable to adjust. Union conditions not allowed.	(1)	Aug. 1	10	---
Elk Fire Brick Co., Drury Run, Pa.	Strike.....	Brick and clay work	Working conditions.....	Adjusted. Workers returned.....	(1)	Aug. 5	(1)	---
Gold Mark Knitting Co., Woonsocket, R. I.	do.....	Knitting.....	Asked \$36.15 and 48-hour week.	Adjusted. Demands granted as asked.	Aug. 2	Aug. 8	20	30
Biselow Hartford Carpet Co., Thompsonville, Conn.	do.....	Carpet work	Wage cut of 35 per cent.	Pending. Employees tried new rate but would not accept it.	do.....	do.....	188	---
Ingber & Co., Philadelphia, Pa.	Controversy..	Pocketbook work	Asked union recognition..	Pending.	(1)	do.....	60	40
Hoffman Co., Portland, Oreg.	Strike.....	Building labor	Wages, conditions, and organization.	Adjusted. Increases allowed; now receive \$5.50 per day and union conditions.	July 17	Aug. 15	18	880
Cloak makers, 65 shops, Philadelphia, Pa.	do.....	Cloak making.....	Asked equalization of work and wages.	Adjusted. Agreement concluded.....	July 29	Aug. 7	1,500	---
Enamellers, Bellaire, Ohio	do.....	Enameling.....	One operator discharged....	Unadjusted. Adjusted before commissioner's arrival.	July 14	Aug. 5	16	184
Susquehanna Colliery, Glen Lyons, Pa.	do.....	Mining.....	Claim high pay through board decision.	Adjusted. Men in error; return satisfied.	Aug. 9	Aug. 10	1,300	---
Edison Co., Easton, Pa.	do.....	Line work	Dispute over time for lunch.	Pending.....	Aug. 6	do.....	25	---
Geo. W. Ellis, Boston, Mass.	do.....	Line work and driving.	Wages and working conditions.	do.....	(1)	do.....	(1)	---
Taxi drivers, Portland, Oreg.	do.....	Driving.....	Wages, hours, and conditions.	do.....	July 29	do.....	150	25
Chamber of Commerce Building, Indianapolis, Ind.	do.....	Building.....	Nonunion labor employed..	Adjusted. All union men employed..	Aug. 3	Aug. 4	4	50
Street-car workers, New Orleans, La.	do.....	Traction.....	Working conditions and desire for arbitration.	Unadjusted. Adjusted before commissioner's arrival.	Aug. 13	Aug. 14	2,700	500
American Magnesite Co., Norristown, Pa.	do.....	Magnesia industry	Wage cuts.....	Adjusted. Returned on agreement to rectify wage inequalities.	Aug. 11	Aug. 13	200	---
Lehigh & Wilkes-Barre Coal Co., Plymouth, Pa.	do.....	Mining.....	Alleged discrimination and working conditions.	Adjusted. Returned; grievance to go to local officials.	Aug. 12	Aug. 14	730	180
Lanston Bros., brokers, Chicago, Ill.	do.....	Telegraph work	Nonunion labor policy being announced by owners.	Pending.....	(1)	do.....	(1)	---
McVickers Motor Co. and garage owners, Chicago Heights, Ill.	Lockout.....	Machine work	Withdrawal of bonus and substituting life insurance.	do.....	July 7	do.....	42	---
American Wire Fabrics, Mount Wolf, Pa.	Strike.....	Metal-wire work	do.....	Adjusted. Returned; will submit grievance to directors.	Aug. 6	Aug. 9	325	25

1 Not reported.

LABOR DISPUTES HANDLED BY THE UNITED STATES DEPARTMENT OF LABOR THROUGH ITS CONCILIATION SERVICE, AUGUST, 1926—Con.

Company or industry and location	Nature of controversy	Craft concerned	Cause of dispute	Present status and terms of settlement	Duration		Men involved	
					Beginning	Ending	Directly	Indirectly
Post & Sheldon Co., Dupont, Pa.	Strike	Silk textile industry	Discharges for failure to work at night.	Adjusted. Company dispensed with compulsory overtime work.	1926 Aug. 6	1926 Aug. 9	72	3
New York Marine Co., New York City.	do	Freight handling	Asked wage increase and time and half for overtime.	Unable to adjust. Company will make no concessions.	Aug. 15	Aug. 20	200	400
Geo. W. Wheelwright Co., Leominster, Mass.	do	Paper-mill work	Wages and working conditions.	Adjusted. Wages increased 10 and 15 per cent.	Aug. 2	Aug. 23	180	
Manville-Jenckes Co., Woonsocket, R. I.	do	Textile crafts	Nonunion loom fixers employed.	Adjusted. Demands granted.	Aug. 10	Sept. 3	3,000	
Waterproof-garment workers, Boston, Mass.	Threatened strike.	Garment trade	Ask 40-hour week.	Adjusted. Allowed 42-hour week and \$44 per week for men and \$35 per week for women.	Aug. 16	Aug. 31	1,000	
Building trades, Bradentown, Fla.	Controversy	Building	Renewal of wage contract.	Adjusted. Allowed \$1 per hour.	July 1	Aug. 1	50	10
Steam fitters, Rhode Island	Strike	Steam fitters' work	Renewal of agreements.	Unclassified. All large firms concluded satisfactory agreements before commissioner's arrival.	July (1)	Aug. 22	(1)	
East Penn Electric Co., Pottsville, Pa.	Threatened strike.	Traction	Discharge of conductor and disagreement upon arbitrator.	Adjusted. Arbitrator selected and strike threat withdrawn.	July 22	Aug. 23	90	50
Sam Finkelstein Co., New York City.	Strike	Cutting garments	Employees attempted to organize the shop; company refused.	Pending	Aug. 17		11	
Stern Cap Co., Lowell, Mass.	do	Cap-making trade	Wages and recognition.	Unclassified. Recognition and increase granted before commissioners' arrival.	Aug. 16	Aug. 23	15	
Continental Upholstering Co., New York City.	Lockout	Upholstering	Open-shop dispute	Pending	July 2		22	14
Old Forge Colliery, Old Forge, Pa.	Strike	Mining	Motorman discharged	Adjusted. Motorman laid off one week.	Aug. 20	Aug. 21	895	5
Building wreckers, Boston, Mass.	do	Wrecking buildings	Wages and recognition	Adjusted. Increases granted; now receive 60 and 75 cents per hour.	Aug. 17	Aug. 27	400	
Derk Upholstering Co., Philadelphia, Pa.	Threatened strike.	Silk-tapestry weaving	Alleged discharge for union activity.	Adjusted. No discrimination practiced; satisfactory agreement.	Aug. 1	Aug. 26	27	98
Starrett Construction Co., Chicago, Ill.	Strike	Building trades	Nonunion labor	Pending	Aug. 25		60	
Guarantee Leather Goods Co., Chicago, Ill.	do	Leather work	Signing of agreement	do	do		6	
Glen Alden Coal Co., Taylor, Pa.	do	Mining	Minor grievances	Adjusted. Returned; grievance committee to settle.	Aug. 18	Aug. 23	871	4

	Textile work	do	do	do	Wage cut of 10 per cent	Adjusted. Agreed on 5 per cent wage cut.	Aug. 24	Sept. 3	150	300
	Electric work on buildings.	do	do	do	Nonunion electricians employed.	Adjusted. Nonunion men dismissed.	Aug. 26	Sept. 1	90	50
	Tannery work	do	do	do	Minor grievance	Unclassified. Settled before commissioner's arrival.	July 15	July 22	20	130
	Building	do	do	do	Open-shop dispute	Adjusted. Terms not yet received	Aug. 28	Sept. 4	(1)	
Total									14,440	2,534

1 Not reported.

Procedure for Settlement of Labor Disputes in Chile

DR. MOISÉS POBLETE TRONCOSO, assistant secretary of the Chilean Ministry of Health, Assistance, Social Welfare, and Labor, in the Pan American Magazine (Santiago) for May, 1925, refers to the Chilean law¹ which contains the two principles of compulsory conciliation and optional arbitration in the settlement of labor disputes as "the law which places Chile among the most advanced nations of the world in matters of legislation toward prevention and solution of collective conflicts." A digest is given here of its more important provisions.

The law applies to mines, quarries, factories, nitrate undertakings, and commercial establishments employing more than 10 workers.

When a collective labor dispute arises the workers must elect delegates who shall endeavor to bring about a settlement of the difference with the approval of the employer or his representative. Every head, agent, or manager of the undertakings covered by this law is obliged to receive the delegates within 24 hours after the request has been made to him in writing by the workers. If the manager can not give an immediate decision as regards the request he shall not delay his reply for more than five days unless a longer period is fixed by agreement with the delegates. Permanent delegations may be formed if this is considered desirable by both parties.

Should no satisfactory result be arrived at by this procedure, the parties shall submit their difference to one of the 10 permanent conciliation boards which are composed of 6 members each, 3 of whom are elected by the employers and 3 by the workers. The members shall hold office for a year at a time and may be reelected or reappointed indefinitely. They receive a fee of 20 pesos for each ordinary session which they attend.

The boards are to keep a record of all disputes resulting from the application of this law and of the laws relating to labor agreements and trade-unions. If the parties arrive at an agreement it is to be recorded in writing in the form of a special document signed by the chairman and secretary of the board and by all the representatives of the employers and the workers.

In case of failure to reach an agreement or of evasion by either of the interested parties of responsibility, the board shall publish in the official journal a report setting forth the obligations of the parties to the dispute and the circumstances in which one of the parties has failed in its duty, such publication to be made with the object of openly reproving the defaulting party and enlisting the support of public opinion.

Should the procedure followed by the conciliation board fail to lead to a satisfactory solution of the dispute, recourse may be had to arbitration, but this is optional. The arbitration court shall consist of one or three arbitrators, as decided by the interested parties who select them. In case of failure to agree as to the appointment of any or all of the arbitrators, the Ministry of the Interior shall have the right to appoint them. The arbitration award shall be binding on the parties for at least six months from the date of its issue.

¹ Law (No. 4056) enacted Sept. 8, 1924.

Even public services may have recourse to arbitration. In such cases, however, this law authorizes the Government to employ substitutes for the strikers in order to maintain the services, the interruption of which might constitute a menace either to public health or to the economic life of the country.

The law determines also the conditions under which a strike or lockout may be declared after all attempts to arrive at an agreement have failed. It specifies that a strike may be declared provided the following conditions are fulfilled: (1) The term of notice for the termination of the collective contract has expired; (2) when in secret ballot, at which at least two-thirds of the members of the union are present and by an absolute majority, it is decided to declare a strike; and (3) when a representative of the permanent conciliation board ascertains that the formalities and requirements of this law have been complied with.

An employers' association shall not declare a lockout until this measure has been decided upon at a general meeting of the association attended by not less than two-thirds of its members by an absolute majority of the persons present. In this case also a representative of the conciliation board must be convinced that the association has lived up to the requirements of this law and that the workers have rejected the proposal for arbitration made by the employers.

Refusal of either of the parties to submit a difference to the permanent conciliation board shall entail a fine amounting in the case of the employer to not less than 500 nor more than 5,000 pesos and in case of the workers to not less than 50 nor more than 500 pesos, which shall be enforced against the union to which the worker belongs.

An employer or manager who without sufficient reason fails to receive the workers' delegates shall be liable to a fine of not less than 500 nor more than 5,000 pesos. Employers who hinder the delegates in the exercise of their functions may be fined for an amount not less than 50 nor more than 1,000 pesos.

LABOR ORGANIZATIONS AND CONGRESSES

Convention of National Women's Trade Union League ¹

THE National Women's Trade Union League of America held its tenth biennial convention in Kansas City, Mo., June 28 to July 3, 1926.

Predominant among the new industrial conditions with their new opportunities and their new tests which the league feels it is confronting is "the need both for educational work and organization in the new industrial South." It is here that the textile industry particularly is rapidly expanding in unstandardized and unorganized districts where woman and child workers may be employed at low rates. The convention decided not only to carry out a labor education plan in the South but also to train members of the league for the staff duties of the headquarters of national and local leagues.

The convention made an appeal to the President, to the National Congress, and to the governors and legislatures of the States requesting (1) that the right to organize and protect workers against the common abuse of the injunction by interfering with their legitimate activities be guaranteed, and (2) that legislation be passed providing for an eight-hour day and one day of rest in seven.

The league's legislative program as approved by the convention emphasizes "the child labor amendment and its ratification of the primary piece of Federal work." The league's indorsement as the Federal Department of Education bill was renewed and the demand for the enforcement of the merit system in the civil service reiterated. The organization again voiced "its opposition to the so-called 'equal rights' amendment to the Federal Constitution advocated by the National Woman's Party."

One of the resolutions adopted urges all the State departments of labor to compile and publish monthly statistics of employment and earnings as an aid in lessening at least the seasonal and cyclical fluctuations in employment. At present several State departments of labor do make such compilations and the United States Bureau of Labor Statistics makes a similar monthly compilation for selected establishments and industries. The resolution in full is as follows:

Whereas unemployment due to seasonal fluctuations and to recurrent changes in general business activity affects disastrously the homes and standards of living of wage earners and is of vital concern to all women; and

Whereas many industries in which women are largely employed are peculiarly susceptible to seasonal fluctuations; and

Whereas recent studies of the problems of stabilizing business have shown that current compilation of adequate information about the trend of employment would aid in preventing or at least lessening the severity of these fluctuations, and the advantage of knowing these facts is already demonstrated in the statistics now made available by the Federal Bureau of Labor Statistics and by the State departments of California, Illinois, Maryland, Massachusetts, New York, Pennsylvania, and Wisconsin: Therefore be it

¹Life and Labor Bulletin, Chicago, July, 1926.

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Resolved, That as representatives of women in industry we urge every State department of labor to undertake as soon as possible the monthly collection and prompt publication of statistics of employment and earnings in accordance with the plan recently advocated by the committee on governmental labor statistics of the American Statistical Association, whereby each State will collect information about the industries within its own borders, to be published separately for the State and to be transmitted to the Federal Bureau of Labor Statistics for use in formulating national indexes of employment; and that we respectfully suggest that these facts be collected and tabulated in such a manner as will show the trend of employment and earnings for women workers separately from the facts about men.

Believing that the league needed "to work out a deliberate scientifically planned procedure in the light of its self-examination," a one-day institute on trade-union organization was held during the convention. The national committee which arranged the institute will collate the data and continue the work of the conference.

Miss Rose Schneiderman is the new president of the league, Mrs. Raymond Robins, however, being again made honorary president.

Three Summer Trade-Union Institutes ²

THE inauguration of summer institutes at Brookwood Labor College by important labor organizations is an interesting development of the workers' educational movement in the United States and is indicative of the increasing trend in trade-unionism toward the study and discussion of the larger aspects of industrial problems. Three of these conferences were held consecutively July 12 to August 14, 1926, under the auspices, respectively, of the United Textile Workers of America, the International Brotherhood of Electrical Workers and Operators, and a group of railway labor unions.

Textile Workers' Institute

THE Textile Workers' Institute which opened July 12 was organized for the purpose of securing from the Brookwood faculty additional data as to the best possible methods the United Textile Workers of America could adopt to assist in stabilizing the textile industry. The discussion covered not only the matter of raw material used in the industry but also banking, transportation, and distribution problems relative to the manufacture of textiles.

The conference also considered the matter of the waste which was alleged to result from interlocking selling and inefficient industrial management. It was agreed "that increased individual production through the placing of new machines should give to the worker increased returns in his envelope according to value produced."

Commenting on the conference, the president of the textile workers said:

This week at the institute impressed me quite forcibly with the fact that the workers as a whole, not alone in our industry but in all industries, must secure

² Data are from American Federationist, Washington, D. C., September, 1926, pp. 1100-1102; Journal of Electrical Workers and Operators, Washington, D. C., August, 1926, pp. 363-378, 402-403; Locomotive Engineers' Journal, Cleveland, September, 1926, pp. 656, 657, and 712; and Brookwood Review, Katonah, N. Y., May-June, 1926, pp. 1 and 3.

vital and necessary statistics so as to be in a position to present to the public, through the press or otherwise, the facts as they are in the industry in which they are employed.

According to the president, the institute also showed how imperative it is for members of local textile unions to report to their international organization every change in management, in working conditions, and in fabric produced.

Electrical Workers' Giant-Power Conference

A GIANT-POWER institute was in session from July 19 to 31 and was attended by delegates from 10 local unions of the International Brotherhood of Electrical Workers and Operators and representatives from several other labor organizations. Engineers, economists, and national labor officials were among the speakers, whose subjects included: The relation of giant power to the building trades; public ownership of giant power; mastering of power production; labor, the public and giant-power trends; the giant-power situation in Pennsylvania and New York.

It was prophesied that the development of electrical power would tend to throw out of employment thousands of miners and workers of coal-carrying and electrified railways and in manufacturing industries. Spencer Miller, jr., secretary of the Workers' Educational Bureau, said that all labor is touched and should be interested in giant power. He emphasized the need for bringing intelligence, study, and research to bear upon the giant-power problem.

James P. Noonan, president of the International Brotherhood of Electrical Workers, stated the attitude of his organization to be: "Power is necessary to prosperity. But labor must share in prosperity. We want a profit. We want more than a living wage."

Railway Employees' Institute

THE program of the railway labor institute which met in the early part of August included the following addresses: The development of the railroad industry; activities of the Interstate Commerce Commission in the regulation of railroads and in the direction of transportation developments; company unions; analysis of the Parker-Watson Act; technical training and the effect of the new type of locomotive and of automatic train control on engineers; and benefits of union-management cooperation on several railroads.

One of the speakers "commended the efforts of the railroad brotherhoods to keep the loyalty of their members through social, insurance, and investment features." He thought that union officials should make a careful study of company unions in order to adopt such of their features as might be advantageous to the regular trade-unions.

The establishment of a trade-union railroad research bureau was strongly urged. It was pointed out that the railroad companies have their own departments of research and that "the unions will add tremendously to their own effectiveness when they study the industry minutely and arrive at scientific judgments in regard to wage movements, negotiations, and other labor-management relations."

WORKERS' EDUCATION

Technical Education Committee of International Stereotypers and Electrotypers' Union¹

AMONG the resolutions adopted at the annual convention of the International Stereotypers and Electrotypers' Union of North America, Los Angeles, July 19-24, 1926, was the following:

Whereas we are living in a day of research work; and

Whereas it is in accord with the policy of all progressive labor unions to advance technical education and to furnish all necessary information pertaining to their trades to their members and apprentices: Therefore be it

Resolved, That our international president be empowered to appoint a committee consisting of a stereotyper, electrotyper finisher, and an electrotypewriter, to be known as the technical educational bureau, this bureau to be under the direct supervision of the executive board.

The duties of this committee shall be to obtain all information possible pertaining to our trades and to impart this knowledge to our members when requested to do so under the seal of a local union.

Summer School of International Federation of Trade-Unions²

THE International Federation of Trade-Unions held only one summer school in 1926, while in each of the two preceding years two summer schools were conducted under the auspices of the organization.

The headquarters for this year's session (July 18-31) were in the Uccle Labor College buildings, near Brussels. The school itself is limited to approximately 40 students, but 66 actually attended. Many applicants could not be accommodated. The student body included 26 from Great Britain, 16 from Germany, 8 from Holland, 5 from Austria, 4 from Czechoslovakia, 2 each from Denmark, Spain, and Japan, and 1 from Sweden. There were 13 women among the students.

The students visited various places in Brussels which had a general and a labor interest and were also shown outstanding labor activities in a number of neighboring cities and towns, for example, the glass factories and labor college at Charleroi, the labor club at Antwerp, the Micheroux cooperative factories at Liège, the labor convalescent home near Tribomont, and the "Forward" cooperative spinning mills and the "Forward" restaurant and concert hall at Ghent.

Among the lectures given were those on the following subjects: The Belgian socialist movement, the cooperative movement, the trade-union movement in Belgium, the Workers' Technical College, the strike situation in England, the labor movement in Japan, and the international labor movement.

¹International Stereotypers and Electrotypers Union Journal. Denver, September, 1926.

²Press reports of the International Federation of Trade-Unions, Amsterdam, August, 1926, Vol. IV, No. 8, pp. 1, 2.

Action of Convention of the Wisconsin State Federation of Labor, 1926³

ORGANIZATION and educational matters were given particular prominence in the proceedings of the thirty-fourth annual convention of the Wisconsin Federation of Labor, held at Green Bay, July 20-23, 1926.

Wisconsin already has five labor classes or colleges, three of which are in Milwaukee, one in Madison, and another at Racine. The executive board of the federation recommended that "all central bodies appoint committees to report on the feasibility of establishing labor colleges in their respective jurisdictions." It was advocated that the permanent committee, if one were created, make an effort to have a two weeks' summer labor institute in 1927 at the University of Wisconsin.

A resolution was passed favoring a compulsory indenture of all apprentices and the passage of a bill to protect them against the "vicious practice of commercialization."

Workers' Education in Palestine⁴

THE steady increase of immigration to Palestine has effected a considerable change in the economic situation of the Jewish population. Thousands of workers now have industrial employment in the towns. The Jewish Education Committee of Palestine (*Waadat Hatarbout*), which is nominated annually by the Federation of Jewish Labor in Palestine, has been devoting more and more attention to city workers. Since the setting up of land workers' communes in the Valley of Jezreel, however, the committee has also been active in this section, where it has opened kindergartens and schools and made education available to the younger workers.

At present evening classes are provided in 22 different localities and the total number of students has increased from 900 in 1921 to 3,800 in 1925. In the latter year 68 teachers were instructing these classes. The lecture subjects include the Hebrew language, literature, the labor movement, knowledge of the country, etc.

Besides the evening classes the committee has organized 5 schools for young workers, with 515 students and 16 teachers; 8 clubs for young workers, with 1,252 members; 34 children's and kindergarten schools, with 836 pupils and 55 teachers; vocational classes in such subjects as building, carpentry, concrete work, needlework, and electricity at Tel Aviv and Jerusalem, with 140 students and 10 teachers; scientific lectures attended by 420 students and having 8 teachers; 84 lectures on labor or literature; lectures to impart knowledge of the country, given by 3 traveling teachers; a dramatic studio at Tel Aviv; special courses in singing, dancing, and gymnastics; and a choir and orchestra in the Valley of Jezreel and at Haifa.

The education committee also issues books which deal with labor's educational, vocational, and social problems, and has brought to-

³ Wisconsin State Federation of Labor. Proceedings of the thirty-fourth annual convention held at Green Bay, Wis., 1926. Milwaukee, 1926.

⁴ International Federation of Trade-Unions. Press Reports, Vol. IV, No. 7, Amsterdam, July, 1926.

WAGES AND HOURS OF LABOR

Wages and Hours of Labor in the Iron and Steel Industry in the United States, 1926: Second Article

THE present article contains summary figures for 7 of the 10 departments of the iron and steel industry for which the Bureau of Labor Statistics has collected data. These 7 departments are the Bessemer converters, blooming mills, puddling mills, rail mills, plate mills, sheet mills, and tin-plate mills. Figures for the other 3 departments—blast furnaces, open-hearth furnaces, and bar mills—appeared in the Labor Review for September.

While a survey of all establishments could not be undertaken in collecting these data, the statistics for each department may be accepted as fully representative, as they are based on a sufficient number of representative plants in each district to show conditions in their locality. In practically all establishments the period covered in the survey was in January—in most cases, the last half of the month.

The number of plants and the number of employees covered in each department in 1924 and 1926, together with the average earnings per hour for all employees, including common labor, and for common labor alone, are shown in the following table:

NUMBER OF PLANTS AND EMPLOYEES AND AVERAGE HOURLY EARNINGS FOR ALL EMPLOYEES AND FOR COMMON LABORERS, BY DEPARTMENTS, 1924 AND 1926

Department	Year	Number of—		Average earnings per hour	
		Plants	Employees	All employees	Common labor
Blast furnaces.....	1924	36	15,540	\$0.520	\$0.401
	1926	37	15,329	.517	.389
Bessemer converters.....	1924	11	3,457	.624	.448
	1926	11	2,948	.641	.443
Open-hearth furnaces.....	1924	26	11,611	.635	.434
	1926	31	13,424	.677	.429
Puddling mills.....	1924	17	3,428	.721	.355
	1926	13	2,488	.657	.357
Blooming mills.....	1924	25	5,649	.613	.462
	1926	20	6,188	.627	.451
Plate mills.....	1924	13	4,234	.562	.432
	1926	17	4,202	.606	.425
Standard rail mills.....	1924	7	3,382	.573	.385
	1926	7	3,280	.595	.421
Bar mills.....	1924	31	6,564	.585	.392
	1926	35	7,605	.591	.411
Sheet mills.....	1924	14	9,690	.809	.420
	1926	14	10,753	.759	.475
Tin-plate mills.....	1924	9	10,549	.795	.439
	1926	8	8,892	.704	.426

When 1926 is compared with 1924, the average hourly earnings for all employees in 6 of the departments show increases, the averages in 3 departments show decreases, and the average in the blast furnace

department remains practically unchanged. The increases range from 0.6 cent per hour on the average in bar mills to 4.4 cents in plate mills. The decreases were larger in each case than any of the increases, being 9.1 cents per hour in tin-plate mills, 6.4 cents in puddling mills, and 5 cents per hour in sheet mills.

The term "common labor," so far as possible in this study, has been confined to laborers wholly unskilled and more or less of a floating gang who work in and about the mill proper, but upon whose work the mill was not primarily dependent for operation. The basic rate for common labor is used to a large extent to determine the rates for other occupations requiring little skill and hence is of considerable importance beyond the limits of the occupation proper.

A summary of the full-time hours per week, earnings per hour, and full-time weekly earnings of employees is presented separately for each of the principal productive occupations in the 7 departments shown in this article. The 1926 figures are compared with those for 1924 for each occupation, but, in order to conserve space, figures for all years prior to 1924 have been omitted. These may be obtained, however, from Bulletin 381 of the bureau.

The full-time hours per week of employees in the various departments have, on the whole, varied but little during the period 1924 to 1926, although the working time of a few occupations has been materially changed. The full-time weekly hours of picklers in the sheet-mill department, for example, averaged 63.6 in 1924 as compared with 56.9 in 1926. Also the hours of feeders and laborers in the same department were reduced approximately 8 hours per week on the average. The reductions in working time in these particular occupations were caused by the change in a few plants from the 12 to 8 hour day. While the other selected occupations in those plants have been on an 8-hour basis for many years, picklers, feeders, and laborers still continued to work the 12-hour day.

Hourly earnings have considerably increased in most of the occupations in the Bessemer converting, bloom, plate, and rail-mill departments, but show considerable decreases in the puddling, sheet, and tin-plate mill departments. In only three departments, however, have the changes in hourly earnings been due primarily to a change in basic rates. Basic rates remained almost stationary from 1924 to 1926 in the four departments showing increases, the increased earnings being largely due to increased production and in one or two instances to the addition of a time-saving bonus. The decreases in the puddling, sheet, and tin-plate mill departments have been caused almost entirely by changes in tonnage rates. Most of the establishments covered in these three departments operate on what is known as the "sliding scale," the rates paid employees depending directly upon the selling price of the product. At each interval of two months a new rate is determined, based on actual sales during the two-month period. Thus the rates paid are subject to change at frequent intervals and there is apt to be considerable fluctuation during a two-year period.

AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN THE IRON AND STEEL INDUSTRY, 1924 AND 1926, BY OCCUPATION AND DEPARTMENT

Sheet mills

[No employees worked 44 hours per week]

Occupation	Year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Per cent of employees whose average full-time hours per week were—						
							Over 40 and under 44	Over 44 and under 48	48	Over 48 and under 60	60	Over 60 and under 72	72 and over
Pair heaters.....	1924	14	536	43.4	\$1.027	\$44.50	72	28					
	1926	13	478	43.3	.925	40.05	86	14					
Rollers.....	1924	14	478	43.4	2.148	93.35	73	27					
	1926	14	492	43.3	1.956	84.69	76	24					
Rollers, level handed..	1924	7	114	42.9	1.345	57.69	91	9					
	1926	4	27	43.3	1.162	50.31	78	22					
Rollers' helpers or finishers.....	1924	11	437	43.0	.865	37.28	83	17					
	1926	12	392	43.0	.787	33.84	88	12					
Roughers.....	1924	14	533	43.4	1.150	49.94	74	26					
	1926	14	510	43.3	1.037	44.90	77	23					
Catchers.....	1924	14	570	43.4	1.099	47.70	72	28					
	1926	14	527	43.3	.989	42.82	76	24					
Matchers.....	1924	14	639	43.4	.932	40.42	69	31					
	1926	10	400	43.5	.829	36.06	68	32					
Doublers.....	1924	14	661	43.4	.909	39.42	71	29					
	1926	10	422	43.5	.804	34.97	70	30					
Sheet heaters.....	1924	14	470	43.4	1.559	67.68	73	27					
	1926	14	478	43.3	1.404	60.79	77	23					
Sheet heaters, level handed.	1924	7	115	42.9	1.088	46.29	93	7					
	1926	7	48	43.2	.978	42.25	81	19					
Sheet heaters' helpers..	1924	13	408	42.9	.894	38.51	90	10					
	1926	13	422	42.9	.803	34.45	91	9					
Shearmen.....	1924	10	159	43.7	1.289	56.26	68	26	6				
	1926	12	198	43.6	1.222	53.28	69	30	1	1			
Shearmen's helpers.....	1924	8	203	43.8	.736	32.11	65	30	5				
	1926	12	207	43.6	.683	29.78	67	32	(1)	(1)			
Openers.....	1924	9	284	43.5	.806	34.99	72	28					
	1926	11	287	43.5	.741	32.23	70	29	1				
Openers, level handed..	1926	5	96	44.0	.651	28.64	50	50					
Picklers.....	1924	12	150	63.6	.555	35.48	5		2	13	31	21	29
	1926	11	127	56.9	.631	35.90	6		14	24	34	17	4
Feeders.....	1924	8	101	53.1	.578	30.72	29	22	9	9	2	3	27
	1926	8	93	45.3	.647	29.31	58	25	12				5
Laborers.....	1924	13	757	64.6	.420	27.15			3	20	34	13	30
	1926	14	493	56.6	.475	26.89	10	21		27	22	13	7

¹ Less than 1 per cent.

AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN THE IRON AND STEEL INDUSTRY, 1924 AND 1926, BY OCCUPATION AND DEPARTMENT—Continued

Tin-plate mills

[No employee worked 44 hours per week]

Occupation	Year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Per cent of employees whose average full-time hours per week were—						
							Over 40 and under 44	Over 44 and under 48	48	Over 48 and under 60	60	Over 60 and under 72	72 and over
Rollers.....	1924	9	414	42.7	\$2.099	\$89.36	100						
	1926	8	371	42.7	1.635	69.81	100						
Rollers, level handed.....	1924	6	166	42.7	1.080	46.16	100						
	1926	4	35	42.7	.952	40.65	100						
Roughers.....	1924	9	465	42.7	1.150	49.11	100						
	1926	8	383	42.7	.902	38.52	100						
Catchers.....	1924	9	465	42.7	1.003	42.83	100						
	1926	8	398	42.7	.806	34.42	100						
Screw boys.....	1924	9	484	42.7	.840	36.15	100						
	1926	8	412	42.7	.633	27.03	100						
Doublers.....	1924	8	345	42.7	1.243	53.07	100						
	1926	8	332	42.7	.787	33.60	100						
Doublers, level handed.....	1924	7	303	42.7	1.133	48.38	100						
	1926	5	116	42.7	.800	34.16	100						
Doublers' helpers.....	1924	9	337	42.7	.855	36.45	100						
	1926	8	324	42.7	.663	28.31	100						
Heaters.....	1924	8	152	42.7	1.449	61.80	100						
	1926	6	113	42.7	1.046	44.66	100						
Heaters, level handed.....	1924	9	720	42.7	1.229	52.46	100						
	1926	8	588	42.7	.917	39.16	100						
Heaters' helpers.....	1924	8	252	42.7	.981	41.88	100						
	1926	6	196	42.7	.772	32.96	100						
Shearmen.....	1924	8	123	43.4	1.137	49.35	67	5	9	19			
	1926	7	111	43.1	1.024	44.13	82	18					
Shearmen's helpers.....	1924	3	29	54.5	.465	25.34		17		72	10		
	1926	3	26	58.3	.510	29.73				88	12		
Openers, male.....	1924	6	224	55.3	.721	39.87		5	6	81	8		
	1926	6	239	51.8	.795	41.18	6	25		69			
Tinners.....	1924	6	361	43.4	.976	42.39	100						
	1926	5	225	43.5	.840	36.54	97		3				
Redippers.....	1924	2	38	43.0	1.235	53.11	100						
	1926	2	25	42.9	1.154	49.51	100						
Risers.....	1924	2	39	42.9	.703	30.16	100						
	1926	2	34	42.9	.638	27.37	100						
Branners, male.....	1924	6	73	52.2	.536	27.83	21		53	3		16	7
	1926	5	64	52.2	.505	16.50	45	11	9	3		31	
Assorters, female.....	1924	6	291	43.6	.422	18.40	37	61			2		
	1926	4	250	43.4	.384	16.67	38	62					
Laborers.....	1924	9	197	56.9	.439	24.99			7	30	55	9	1
	1926	8	188	60.3	.426	25.69				50	31	19	

AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN THE IRON AND STEEL INDUSTRY, 1924 AND 1926, BY OCCUPATION AND DEPARTMENT—Continued

Puddling mills

Occupation	Year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Per cent of employees whose average full-time hours per week were—						
							44 and under	Over 44 to 48	Over 48 and under 54	54	Over 54 and under 60	60	Over 60 ¹
Stockers.....	1924	17	188	57.4	\$0.480	\$27.50			26	9	25	13	28
	1926	13	134	51.1	.527	26.93	20	8	7	2	46	13	3
Puddlers.....	1924	11	293	52.8	.912	48.10	2	1	41	52	4		
	1926	8	185	53.5	.767	41.03	2		46	45	6		
Puddlers, level handed.....	1924	16	1,275	45.7	1.051	48.39	2	43	48	5	1		
	1926	11	898	48.6	.874	42.48	(1)	51	43	4	1		
Puddlers' helpers.....	1924	11	259	53.2	.590	31.28	3	1	15	43	38		
	1926	8	200	53.4	.648	34.60	2		50	43	6		
Bushelers.....	1924	4	25	46.3	1.148	53.85	48		24	20	8		
	1926	3	13	46.4	.883	40.97	54		38		8		
Bushelers, level handed.....	1924	11	161	45.6	1.257	57.41	40	30	20	9	1		
	1926	5	48	44.2	.996	44.02	63		38				
Bushelers' helpers.....	1924	6	51	43.7	.674	29.76	71		16	8	6		
	1926	2	13	46.5	.479	22.27	46		54				
Heaters.....	1924	4	11	52.8	1.349	72.36	9		55		36		
	1926	4	12	54.2	1.236	66.99			58	8	33		
Heaters' helpers.....	1924	4	20	54.3	.583	31.59	5		60		35		
	1926	4	14	54.3	.595	32.31			71		21	7	
Bloom boys.....	1924	14	36	51.7	.525	26.34	11	11	31	6	31	8	3
	1926	9	20	51.2	.531	27.19	25		45		25	5	
Roll engineers.....	1924	14	31	64.7	.531	34.45		19			6	6	68
	1926	10	20	62.3	.574	35.76		30			10	25	35
Rollers.....	1924	16	42	51.2	1.252	63.66	14	14	31	12	19	5	5
	1926	11	24	50.9	1.200	61.08	25	8	42	4	17	4	
Roughers.....	1924	12	45	50.4	.877	43.35	9	16	60		4	4	7
	1926	9	32	48.7	.748	36.43	41		53			6	
Catchers.....	1924	16	69	50.9	.856	42.75	13	10	49	4	13	3	7
	1926	11	41	50.9	.698	35.53	24		61	2	10	2	
Hook-ups.....	1924	16	54	51.9	.638	33.02	11	7	50	7	15	4	6
	1926	12	43	50.1	.539	27.00	30		53	2	12	2	
Hotbed men.....	1924	15	84	52.5	.571	30.01	7	12	42	5	27	2	5
	1926	10	65	51.2	.539	27.60	23		42		29	6	
Shearmen.....	1924	16	36	52.6	.570	29.80	28		17	8	25	6	17
	1926	12	23	52.8	.638	33.69	22	9	4	4	43	17	
Shearmen's helpers.....	1924	16	96	50.5	.513	25.77	48		16	5	15	4	13
	1926	13	54	50.6	.588	29.75	46	6	4	6	26	13	
Laborers.....	1924	17	341	59.5	.355	21.31			20	5	18	30	26
	1926	12	151	57.1	.357	20.38		3	17	4	29	44	3

¹ Less than 1 per cent.

² In 1924 all employees who worked over 60 hours per week worked less than 72 hours except 2 stockers and 10 roll engineers. In 1926 no employees worked more than 72 hours per week.

AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN THE IRON AND STEEL INDUSTRY, 1924 AND 1926, BY OCCUPATION AND DEPARTMENT—Continued

Bessemer converters

Occupation	Year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Per cent of employees whose average full-time hours per week were—					
							48 and under	Over 48 and under 54	54 and under 60	60	Over 60 and under 72	Over 72 and not over 84
Stockers.....	1924	10	437	48.3	\$0.613	\$29.59	84	8		9		
	1926	10	317	48.3	.642	31.01	80	3		6	2	
Cupola melters.....	1924	5	19	49.3	.856	42.12	53	32	16			
	1926	4	10	49.2	.888	43.69	40	60				
Cupola tappers.....	1924	4	30	49.7	.723	36.04	37	33	30			
	1926	5	21	49.3	.762	37.57	28	71				
Blowers.....	1924	11	36	48.9	1.274	62.25	75	25				
	1926	11	31	49.7	1.358	67.49	74	19			6	
Regulators, first.....	1924	11	41	50.1	.919	46.05	56	37		7		
	1926	10	28	51.8	.951	49.26	43	43		7	7	
Regulators, second.....	1924	9	43	48.7	.926	45.39	77	23				
	1926	8	31	48.9	.945	46.21	81	19				
Vessel men.....	1924	11	45	51.4	1.166	59.93	7	93				
	1926	11	29	51.8	1.276	66.10	14	79			7	
Vessel men's helpers.....	1924	11	86	50.6	.889	44.72	31	69				
	1926	11	59	50.9	.897	45.66	41	56			3	
Cinder pitmen.....	1924	10	180	49.4	.556	27.46	74	18		8		
	1926	11	122	51.4	.543	27.91	50	7	10	11	13	
Bottom makers.....	1924	11	38	52.3	.777	40.59	63			26	11	
	1926	11	27	51.3	.829	42.53	70			26	4	
Bottom makers' helpers.....	1924	11	71	53.4	.905	32.19	55			31	14	
	1926	11	44	52.3	.648	33.89	50	14		34	2	
Ladle liners.....	1924	11	46	49.6	.839	42.08	72	15		13		
	1926	11	31	50.6	.896	45.29	61	19	10	10		
Ladle liners' helpers.....	1924	11	84	52.0	.604	29.13	60	6		7	18	
	1926	10	54	51.2	.631	32.31	70	6	7	6	11	
Stopper makers.....	1924	11	19	56.6	.573	32.26	32			68		
	1926	11	12	56.6	.596	33.68	33			58	8	
Stopper setters.....	1924	11	53	48.8	.977	47.65	72	28				
	1926	11	40	49.5	1.018	50.39	75	18			8	
Steel pourers.....	1924	11	46	49.8	1.073	52.16	70	30				
	1926	9	27	48.0	1.215	58.32	96	7				
Mold cappers.....	1924	9	66	48.4	.728	35.19	89	11				
	1926	7	33	47.7	.782	37.30	100					
Ingot strippers.....	1924	11	47	51.0	.804	40.88	57	21	21			
	1926	8	26	50.0	.803	40.15	54	35	12			
Laborers.....	1924	11	593	58.0	.448	25.87	26	2	3	52	17	
	1926	11	201	59.4	.443	26.31	18		(1)	57	25	

Blooming mills

Pit cranemen.....	1924	25	189	54.8	\$0.803	\$43.89	22	41	14	5	12	1	6
	1926	27	201	54.3	.855	46.43	24	40	19		12		4
Heaters.....	1924	25	139	55.2	1.192	65.66	7	64	14		8	1	6
	1926	27	122	54.4	1.244	67.67	11	56	20		10	1	2
Heaters' helpers.....	1924	17	108	55.2	.827	45.76	9	50	26	4	5		6
	1926	18	81	54.9	.864	47.43	7	47	31	2	7		5
Bottom makers.....	1924	23	162	53.3	.769	40.99	28	51	4	3	10		3
	1926	25	128	53.9	.791	42.63	26	45	9		15		5
Bottom-makers' helpers.....	1924	20	231	53.3	.632	33.69	32	43	5	3	14		3
	1926	21	171	54.4	.634	34.49	28	43	2		23		4
Roll engineers.....	1924	23	76	55.2	.928	51.60	9	39	32	5	12		3
	1926	25	76	54.6	.978	53.40	12	42	26	3	16		1
Rollers.....	1924	25	90	52.1	1.400	72.99	26	48	9	8	8	2	
	1926	27	78	52.0	1.498	77.90	32	44	6	13	3	3	
Manipulators.....	1924	25	102	52.9	.842	44.57	23	46	7	14	9	2	
	1926	27	87	52.6	.901	47.39	29	40	7	20	3	1	
Table men.....	1924	14	58	51.6	.659	34.31	24	57	12		3	3	
	1926	14	45	52.6	.643	33.82	33	40	13		4	9	
Shearmen.....	1924	24	96	51.7	.777	40.23	36	43	5	10	3	2	
	1926	26	84	51.5	.812	41.82	36	44	5	14		1	
Shearmen's helpers.....	1924	23	254	52.5	.590	30.57	43	34	3	10	8	2	
	1926	23	168	52.2	.601	31.37	37	33	6	19	2	3	
Laborers.....	1924	24	742	57.4	.462	26.51	42	7	3	27	19	2	
	1926	22	429	56.3	.451	25.39	39		16	27	14	4	

AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN THE IRON AND STEEL INDUSTRY, 1924 AND 1926 BY OCCUPATION AND DEPARTMENT—Continued

Plate mills

Occupation	Year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Per cent of employees whose average full-time hours per week were—						
							48 and under	Over 48 and under 54	54 and under 60	60	Over 60 and under 72	72	Over 72 and not over 84
Charging-crane and charging-machine operators.	1924	13	87	57.1	\$0.679	\$37.79	---	41	2	14	43	---	---
	1926	16	88	56.4	.711	40.10	23	23	3	17	34	---	---
Heaters.	1924	13	90	56.5	.961	52.52	---	54	11	---	34	---	---
	1926	17	85	55.5	1.103	61.22	14	52	2	4	28	---	---
Heaters' helpers.	1924	12	126	61.6	.538	32.84	2	17	20	---	46	---	14
	1926	15	118	62.4	.635	39.62	3	10	15	29	26	---	16
Roll engineers.	1924	12	46	63.3	.614	38.99	---	24	13	13	41	---	9
	1926	14	35	63.0	.651	41.01	9	17	---	23	37	---	14
Rollers, sheared-plate mills.	1924	10	34	56.5	1.300	71.62	21	18	6	21	35	---	---
	1926	13	30	57.0	1.364	77.75	30	---	10	10	50	---	---
Screw men, sheared-plate mills.	1924	8	33	54.7	1.052	56.78	33	9	6	18	33	---	---
	1926	10	26	55.0	1.088	59.84	46	---	12	---	42	---	---
Table operators, sheared-plate mills.	1924	10	40	56.5	.730	39.48	28	8	13	25	25	---	---
	1926	12	32	56.1	.804	45.10	38	---	16	6	41	---	---
Hook men, sheared-plate mills.	1924	10	105	56.0	.644	35.05	30	7	7	27	30	---	---
	1926	12	83	56.1	.693	38.88	36	---	12	11	41	---	---
Roll hands, other, sheared-plate mills.	1924	10	61	58.4	.555	31.08	15	8	7	36	34	---	---
	1926	10	36	55.5	.725	40.24	33	---	6	25	36	---	---
Rollers, universal mills.	1924	6	13	56.4	1.251	70.34	15	23	---	31	31	---	---
	1926	5	13	56.3	1.383	77.86	31	23	---	15	31	---	---
Screw men, main rolls, universal mills.	1924	6	15	56.0	.841	48.45	13	20	---	40	27	---	---
	1926	6	17	57.1	.937	53.50	18	18	---	41	24	---	---
Screw men, side rolls, universal mills.	1924	6	17	56.6	.642	37.31	12	18	---	29	41	---	---
	1926	6	18	57.5	.709	40.77	22	17	---	28	33	---	---
Roll hands, other, universal mills.	1924	6	19	56.7	.555	32.27	11	16	---	53	21	---	---
	1926	5	20	58.2	.601	34.98	15	---	---	60	25	---	---
Shearmen.	1924	13	108	55.8	.793	43.15	35	---	18	30	18	---	---
	1926	17	101	56.3	.836	47.07	29	9	13	40	10	---	---
Shearmen's helpers.	1924	13	767	55.5	.529	28.85	34	(1)	19	32	15	---	---
	1926	17	674	55.1	.579	31.90	32	3	15	44	7	---	---
Laborers.	1924	11	640	56.8	.432	24.20	35	---	23	32	10	---	---
	1926	16	304	56.1	.425	23.84	41	1	13	28	16	(1)	---

¹ Less than 1 per cent.

AVERAGE CUSTOMARY FULL-TIME HOURS PER WEEK, AVERAGE EARNINGS PER HOUR, AND AVERAGE FULL-TIME WEEKLY EARNINGS IN THE IRON AND STEEL INDUSTRY, 1924 AND 1926, BY OCCUPATION AND DEPARTMENT—Continued

Standard rail mills

Occupation	Year	Number of plants	Number of employees	Average full-time hours per week	Average earnings per hour	Average full-time weekly earnings	Per cent of employees whose average full-time hours per week were—					
							48	Over 48 and under 54	54 and under 60	60	Over 60 and under 72	72 and under 84
Charging-machine operators.	1924	3	23	54.8	\$0.595	\$32.61	61				39	
	1926	2	20	54.8	.713	39.07	75				25	
Reheaters	1924	3	10	59.0	.897	52.95	50	30				20
	1926	3	9	53.1	1.034	54.91	44	33			22	
Reheaters' helpers	1924	2	8	54.8	.521	28.56	75				25	
	1926	3	14	53.6	.627	33.61	50	36		7	7	
Roll engineers	1924	6	24	57.0	.747	42.57	25	13	17		46	
	1926	5	19	57.4	.757	43.45	32		26		42	
Rollers	1924	5	12	55.8	1.783	99.49		67			33	
	1926	5	11	54.2	1.888	102.33	27	45		9	18	
Assistant rollers	1924	6	18	56.5	.982	55.49		67		11	22	
	1926	6	14	55.3	1.015	56.13	29	21	14	21	14	
Table lever men	1924	7	83	54.8	.750	41.09		73			27	
	1926	7	66	53.5	.747	39.96	33	42		15	9	
Table men	1924	4	30	59.6	.650	38.76		47			53	
	1926	3	21	58.3	.687	40.05	14	33	5		48	
Guide setters	1924	7	37	57.1	.810	46.27		54		24	22	
	1926	7	31	56.9	.836	47.57	10	39	6	26	19	
Hot-saw men	1924	7	27	55.7	.636	35.45	15	41		26	19	
	1926	7	22	54.5	.696	37.93	27	32	5	27	9	
Hot-saw helpers	1924	6	88	55.9	.511	28.54	13	45		15	27	
	1926	6	56	56.6	.509	28.81	11	38		30	22	
Hotbed lever men	1924	7	64	54.3	.595	32.28	13	52		16	20	
	1926	7	51	54.1	.564	30.51	29	43		16	12	
Hotbed men	1924	6	64	54.2	.467	25.33	9	64		19	8	
	1926	6	78	54.1	.518	28.02	15	64		14	6	
Straighteners	1924	7	158	53.7	1.142	61.33	23	56		16	6	
	1926	7	138	53.0	1.217	64.50	28	55		17		
Straighteners' helpers	1924	7	300	56.9	.556	31.65	21	38		9	4	28
	1926	7	214	53.7	.500	31.68	38	40		13	9	
Chippers	1924	7	193	54.9	.689	37.82	20	48		21	11	
	1926	7	145	55.3	.695	38.43	25	37		25	14	
Drillers and punchers	1924	7	347	57.5	.595	34.21	20	41		18	8	13
	1926	7	233	55.4	.675	37.40	22	40		25	13	
Cold-saw men	1924	7	24	55.5	.497	27.59	50			33		17
	1926	7	20	53.2	.540	28.73	65			25	10	
Cold-saw helpers	1924	6	141	55.7	.443	24.69	45			43	4	8
	1926	6	122	54.6	.447	24.41	56	1		32	11	
Inspectors	1924	7	95	57.9	.530	30.71	33	14		31	13	11
	1926	7	85	55.2	.591	32.62	15	48	1	26	9	
Laborers	1924	7	404	63.6	.385	24.51	24	4		40	9	23
	1926	6	234	56.6	.421	23.83	34		(1)	55	10	

¹ Less than 1 per cent.

Wages in the Iron and Steel Industry in Great Britain in the Spring of 1926

THE Bureau of Labor Statistics receives frequent requests for information concerning occupational wage rates and earnings and hours of labor in foreign countries. Few of the inquiries can be answered. This is particularly true as regards pieceworkers, who constitute the great majority of workers in many industries.

The foreign government statistical offices have scant figures and more often none at all. This condition was true before the World War, when their funds were more plentiful than now, and it is even more true at this time. Statistical wage research is expensive.

Further, such research depends on the cooperation of employers who have the basic data, and such cooperation does not seem to be very highly developed in Europe. There are plenty of figures available as to production, but not as to wages, especially wages of piecework occupations.

A representative of the bureau went to Great Britain and Germany in the spring of 1926 to collect such data concerning wages and hours of labor in the iron and steel and pottery industries as could be obtained in a brief trip. As stated above, very little information of this character is available in public documents. The same is true as to private publications, and it was necessary to accept such data as could be hurriedly gathered from individual employers and union officials. The material presented here relating to the iron and steel industry is fragmentary. There was little opportunity to compile data direct from pay rolls with the painstaking accuracy employed by the Bureau of Labor Statistics in collecting wage data in the United States.

The present article deals with the British iron and steel industry.

Methods of Wage Adjustments

THE iron and steel employers of Great Britain and their employees are each organized. Between the two organizations there has been developed a system of adjustments applying to wages and hours and other working conditions.

A prominent feature in wage matters is the sliding scale whereby wages go up or down with the selling price of the product. This sliding scale has done much to stabilize wage agreements.

Wage rates differ as between districts and as between plants in the same district, although there are some rates, like those for puddling, that seem to be fairly uniform generally. Throughout this article wage rates in English money have been converted into United States money on the par basis, i. e., \$4.8665 to the pound sterling.

Wage adjustments are continually in progress. A change of rate may follow any change of equipment, process, or product, apart from the automatic change of the sliding scale. To meet conditions, wage boards have been established by mutual agreement for the handling of disputed questions. Three short documents are reproduced at the end of this article to illustrate the methods adopted for the adjustment of wages and working conditions.

Blast Furnaces

TABLE 1 shows the full-time weekly earnings at three different blast furnaces. The employees work eight hours per day and seven days per week.

TABLE 1.—FULL-TIME WEEKLY EARNINGS IN SPECIFIED OCCUPATIONS AT THREE BLAST FURNACES

[Data furnished by an employer]

Occupation	Full-time weekly earnings								
	Furnace A—hand charged			Furnace B—hand charged			Furnace C—mechanically charged		
	£	s.	d.	£	s.	d.	£	s.	d.
Keeper	5	14	4 (\$27.83)	5	8	8 (\$26.44)	5	8	5 (\$26.38)
Slagger	4	4	10 (\$20.64)	3	16	0 (\$18.49)	3	18	0 (\$18.97)
Slagger's helper	4	4	10 (\$20.64)	3	16	0 (\$18.49)	3	18	0 (\$18.97)
Charger (top filler)	4	13	7 (\$22.78)	5	10	11 (\$26.99)			
Coke charger				3	15	6 (\$18.37)			
Mine filler (ore)	4	8	11 (\$21.63)	5	5	10 (\$25.76)			
Brakeman (hoistman)	4	8	11 (\$21.63)	5	5	10 (\$25.76)			
Weighman	2	13	3 (\$12.96)	2	13	5 (\$12.99)	2	13	4 (\$12.97)
Coke filler	3	7	4 (\$16.38)	4	14	9 (\$23.05)			
Hoistman							4	15	5 (\$23.21)
Carman							4	14	8 (\$23.03)
Transfer carman							3	8	6 (\$16.66)
Coke crane driver							3	12	10 (\$17.73)
Officer (first day shift only)							3	6	3 (\$16.12)
Gantry men, bunker men	4	10	5 (\$22.01)	4	10	5 (\$22.01)	4	10	5 (\$22.01)
Blowing engineer	3	19	11 (\$19.44)	3	19	11 (\$19.44)	3	19	11 (\$19.44)
Stove men, first	3	19	11 (\$19.44)	3	19	11 (\$19.44)	3	19	11 (\$19.44)
Stove men, second	3	6	6 (\$16.18)	3	6	6 (\$16.18)	3	6	6 (\$16.18)
Boilermen (3-ton boilers)	3	8	9 (\$16.72)	3	8	9 (\$16.72)	3	8	9 (\$16.72)
Boilermen (14-ton boilers)	3	19	11 (\$19.44)	3	19	11 (\$19.44)	3	19	11 (\$19.44)
Hydraulic engineer	2	15	1 (\$13.41)	2	15	1 (\$13.41)	2	15	1 (\$13.41)
Pumpmen (Tuyère)	3	3	10 (\$15.54)	3	3	10 (\$15.54)	3	3	10 (\$15.54)
Turbo drivers	3	8	1 (\$16.56)	3	8	1 (\$16.56)	3	8	1 (\$16.56)
Cleaners, boiler	3	15	0 (\$18.25)	3	15	0 (\$18.25)	3	15	0 (\$18.25)
Pumpmen	3	0	6 (\$14.72)	3	0	6 (\$14.72)	3	0	6 (\$14.72)
Furnace laborers	2	13	1 (\$12.91)	2	13	1 (\$12.91)	2	13	1 (\$12.91)

Rates per eight-hour shift in selected occupations at one blast furnace are given below. The men work seven shifts per week.

	s.	d.		s.	d.
Keepers-----	15	1 (\$3. 67)-	18	11 (\$4. 60)	
Keepers' helpers (slaggers)-----	12	0 (\$2. 92)-	15	1 (\$3. 67)	
Blast enginemen-----			8	11 (\$2. 17)	
Firemen-----			8	1 (\$1. 97)	
Laborers-----			5	11 (\$1. 44)	

Open-Hearth Furnaces

THE following full-time weekly earnings at one open-hearth furnace and rolling mill were supplied by an employer. When operating the normal full time, the furnace averages $5\frac{2}{3}$ shifts per week and the rolling mill $5\frac{1}{3}$ shifts per week. Eight hours constitute a shift.

TABLE 2.—FULL-TIME WEEKLY EARNINGS AT AN OPEN-HEARTH FURNACE AND MILL

Occupation and department	Full-time weekly earnings			Occupation and department	Full-time weekly earnings		
<i>Furnace</i>				<i>Rolling mills—Continued</i>			
	£	s.	d.		£	s.	d.
First hand.....	14	13	2½ (\$71.35)	Stoppers (for cutters).....	2	17	7½ (\$14.02)
Second hand.....	9	10	5½ (\$46.35)	Stockers (pilars).....	2	16	8½ (\$13.80)
Third hand.....	7	6	6½ (\$35.65)	Heaters.....	5	7	7½ (\$26.18)
Pitman.....	10	1	6½ (\$49.04)	Heaters, assistant.....	3	17	8½ (\$18.91)
Pitman's helper.....	2	17	5½ (\$13.98)	Doggers.....	3	2	3½ (\$15.16)
Charge wheelers.....	2	18	7½ (\$14.26)	Lid lifters (soaking pit).....	3	2	3½ (\$15.16)
First ladleman.....	3	0	9½ (\$14.79)	Firemen (soaking pit).....	2	17	7½ (\$14.02)
Second ladleman.....	3	7	3½ (\$16.37)	First slaggers.....	2	13	5½ (\$13.01)
Third ladleman.....	3	7	3½ (\$16.37)	Second slaggers.....	2	12	8½ (\$12.82)
Stopper maker.....	2	3	7½ (\$10.61)	Engine drivers (mill).....	2	17	1½ (\$13.90)
Gas-producer men.....	3	5	6½ (\$15.95)	Oiler (engine).....	2	10	0½ (\$12.18)
First hand, mixer.....	5	8	10½ (\$26.50)	Condenser men (engine).....	2	13	3½ (\$12.97)
Second hand, mixer.....	4	1	7 (\$19.85)	Hydraulic-engine men.....	2	10	0½ (\$12.18)
Third hand, mixer.....	3	12	10½ (\$17.74)	Boiler firemen.....	2	10	0½ (\$12.18)
Ladlemen, mixer.....	2	13	11½ (\$13.13)	Boiler feeders (headman).....	2	19	9½ (\$14.55)
Pan fillers.....	2	13	11½ (\$13.13)	Roller gear oilers.....	2	10	0½ (\$12.18)
Pit-steam-crane men.....	5	6	0½ (\$25.81)	Filler men (turning ingots).....	3	2	3½ (\$15.16)
Electric-crane men.....	3	10	7½ (\$17.19)	Electric-crane men, 100-ton.....	2	12	1½ (\$12.68)
Boilerman.....	2	12	1½ (\$12.68)	Electric-crane men, 5-ton.....	2	15	8½ (\$13.53)
Hydraulic-engine man.....	2	19	5½ (\$14.47)	Steam-crane men.....	3	3	1½ (\$15.30)
Ingot weighman.....	2	9	4½ (\$12.01)	Steam crane slingers (put on chains, etc.).....	2	14	6½ (\$13.27)
Electric chargemen.....	3	2	6½ (\$15.22)	First loaders, hot bank (cooling).....	3	11	9½ (\$17.47)
<i>Rolling mills</i>				Second loaders, hot bank (cooling).....	3	6	10½ (\$16.27)
Rollers.....	6	15	8 (\$33.01)	Gas producemen.....	2	13	3½ (\$12.97)
Coggers.....	3	5	10½ (\$16.03)	Hot bank cranemen.....	3	13	4½ (\$17.86)
Roughers.....	3	5	10½ (\$16.03)	Platform boys.....	15	6½	6½ (\$3.79)
Finishers.....	3	7	7½ (\$16.46)	Platform boys (spare).....	18	8½	8½ (\$4.50)
Finishers, extra.....	3	1	3½ (\$14.91)	First hand roll changer.....	19	7½	7½ (\$4.77)
Special finishers.....	3	1	3½ (\$14.91)	Second hand roll changer.....	2	9	6½ (\$12.06)
Guide setter.....	3	0	8½ (\$14.77)	Third hand roll changer.....	2	6	7½ (\$11.34)
Guide setter's helper.....	2	6	7½ (\$11.34)		2	2	11½ (\$10.45)
Sawmen (cutters).....	3	6	7½ (\$16.21)				

Earnings per eight-hour shift in selected occupations in one plant are shown below. In both the melting process and in the mill the three-shift system is used. In melting, the first and second crews work six 8-hour shifts per week, and the third crew five 8-hour shifts and one 6-hour shift. In the mill the first and second crews also work six 8-hour shifts, but the third crew works only five 8-hour shifts.

Melting:		s.	d.
First melter.....	36	11	(\$8.98)
Second melter.....	24	1	(\$5.86)
Third melter.....	19	9	(\$4.81)
Pitman.....	18	5	(\$4.48)
Pourers.....	17	2	(\$4.18)
Ladle liner and patcher.....	12	--	(\$2.92)
Slingers (for cranes).....	7	7	(\$1.85)
Gas producemen.....	9	4	(\$2.27)
Cranemen.....	9	10	(\$2.39)
	10	5	(\$2.53)
Laborers.....	6	9	(\$1.64)
Rolling mill:			
Heater.....	22	9	(\$5.54)
Heater's helper.....	14	11	(\$3.63)
Roller.....	40	1	(\$9.75)
Cogger.....	20	9	(\$5.05)
Catcher.....	21	9	(\$5.29)
Hooker.....	14	7	(\$3.55)

Rolling mill—Continued

Sawman	14	4	(\$3. 49)
	16	7	(\$4. 04)
Cranemen	7	11	(\$1. 39)
	8	3	(\$2. 01)
Slinger	11		(\$2. 68)
	6	7½	(\$1. 61)
General laborers	6	9	(\$1. 64)
Roll engineer	12	9	(\$3. 10)

Manchester¹

In the open-hearth furnaces in Manchester, stockers are paid 50s. (\$12.17) per week of 46⅔ hours, and as they work regular shift time they average 8s. 7d. (\$2.09) per shift of 8 hours. Stock cranemen earn 7s. (\$1.70) per shift plus an average output bonus of 2s. 6d. (61 cents) plus the present sliding scale of 26¼ per cent, a total of 12s. (\$2.92) per shift.

The rate for melting is 1s. 11d. (47 cents) per ton plus 26¼ per cent, or 2s. 5d. (59 cents) for cold-metal basis. The hot-metal basis is 1s. 9½d. (44 cents) per ton plus 26¼ per cent, or 2s. 3d. (55 cents). About 85 per cent of the work is done at the latter rate. The rate is divided among the workers, the first hand melter receiving 47 per cent, the second hand 30 per cent, and the third hand 23 per cent. A typical furnace produces 700 to 800 (average, 750 tons) per week, or 42.86 tons per shift. At this rate of output the melting hands average 96s. 5d. (\$23.46) per shift, of which the first melter receives 45s. 4d. (\$11.03), the second melter 28s. 11d. (\$7.04), and the third melter 22s. 2d. (\$5.39).

The number of employees in each occupation and the rates paid in a typical plant of seven furnaces in Manchester are shown in Table 3, below:

TABLE 3.—NUMBER OF EMPLOYEES PER SHIFT, AND RATES PAID IN TYPICAL OPEN-HEARTH PLANT OF 7 FURNACES

Occupation	Number	Rate per 8-hour shift		
		Basic rate	Production bonus	Total rate *
		s. d.	s. d.	s. d.
Charging-machine operators	3	(^b)		11 8 (\$2.84)
Teemers (pourers)	2	11 0 (\$2.68)	11 0 (\$2.68)	27 9¼ (\$6.76)
Ladlemen	2	6 6 (\$1.58)	6 0 (\$1.46)	15 9¼ (\$3.84)
Ladlemen's helpers	2	5 6 (\$1.34)	2 0 (\$0.49)	9 5½ (\$2.30)
Stopper maker	1	6 0 (\$1.46)	2 0 (\$0.49)	10 1¼ (\$2.46)
Pitmen	7	(^b)		23 2 (\$5.64)
Teeming cranemen	2	8 0 (\$1.95)	4 0 (\$0.97)	15 2 (\$3.69)
Stripping cranemen	3	7 0 (\$1.70)	3 6 (\$0.85)	13 4 (\$3.24)
Laborers	2	4 10 (\$1.18)		* 7 2 (\$1.74)

* Includes sliding scale of 26¼ per cent.

^b Paid on tonnage basis.

* If rate does not make this amount per shift, enough is added to bring it to this total.

¹ Data furnished by a labor union official.

The full-time hours are as follows: First crew, Sunday, 6 p. m. to 10 p. m.; Monday to Friday, 2 p. m. to 10 p. m.; no work on Saturday; second crew, Sunday to Friday, 10 p. m. to 6 a. m.; third crew, Monday to Saturday, 6 a. m. to 2 p. m. This makes $5\frac{1}{2}$ shifts and 44 hours per week for the first crew and 6 shifts and 48 hours for the second and third crews; thus the three crews work a total of $17\frac{1}{2}$ shifts and average $46\frac{2}{3}$ hours per week per crew.

The gas is turned off Saturday at 2 p. m., repairs are made Saturday night and Sunday morning, and the gas is turned on again as soon as the repairs are finished. The furnaces are charged at noon, Sunday, and one man keeps watch until 6 p. m., when the full crew comes on and production starts. The first charge is often in the ladle by 9 o'clock Sunday night, when the furnace is again charged. From 10 to 11 charges of cold metal and 12 to 14 charges of hot metal can be handled in a full week. The men in each occupation pool their weekly earnings and divide them.

Following is a statement of heavy steel production in Great Britain:

1920—154,108 men, producing 6,831,000 tons, or an average of 44.3 tons per man.

1922—82,839 men, producing 4,645,000 tons, or an average of 56 tons per man.

1923—101,000 men, producing 6,163,000 tons, or an average of 60.9 tons per man.

The increase in per capita production is due in part to improved or new plant, but more to the increased efficiency of the men, since the change to the 8-hour day. Through this increased production the men who lost 20 to 25 per cent of their earnings under the adjustment scheme when the 8-hour day was introduced have been able to earn as much under the 8-hour shift as under the 12-hour shift. Further, men who were accustomed to certain wages when the percentage scale was high are desirous of having as much income under the lower scale as they had under the higher, and this has been an incentive to increased production.

Birmingham²

The melting rates and the weekly hours are the same in Birmingham as in Manchester. The melting crew, however, usually consists of four men, instead of three. The earnings of the entire crew per shift average 96s. 5d. (\$23.46), divided as follows: First melter, 38s. $4\frac{3}{4}$ d. (\$9.34); second hand, 25s. 11d. (\$6.31); third hand, 19s. $2\frac{1}{2}$ d. (\$4.67); fourth hand, 12s. $5\frac{3}{4}$ d. (\$3.04). If there are only three men in the crew the earnings are usually divided on the basis of 46, 31, and 23 per cent, respectively.

²Data furnished by labor union officials.

The rates for the various other occupations are shown below:

TABLE 4.—RATES PER 8-HOUR SHIFT IN SPECIFIED OPEN-HEARTH OCCUPATIONS IN BIRMINGHAM

Occupation	Basic rate per shift	Production bonus	Total per shift *
	s. d.	s. d.	s. d.
Stockers.....	8 7 (\$2.09)		8 7 (\$2.09)
Stock crane-men.....	6 0 (\$1.46)	11 0 (\$2.68)	9 10½ (\$2.41)
Charging-machine operators.....	6 0 (\$1.46)	14 0 (\$3.41)	10 6½ (\$2.56)
Teemer.....	7 6 (\$1.83)	10 0 (\$2.43)	22 1½ (\$5.38)
Ladleman.....	7 6 (\$1.83)	3 6 (\$0.85)	4 5 (\$1.07)
Ladleman's helper.....	5 9 (\$1.40)		7 3 (\$1.76)
Pitman.....	(b)		* 24 2½ (\$5.89)
Teeming crane-man.....	7 0 (\$1.70)	14 0 (\$3.41)	10 9½ (\$2.63)
Stripping crane-man.....	6 0 (\$1.46)	11 0 (\$2.68)	9 10½ (\$2.40)
Stopper maker.....	5 6 (\$1.34)		* 7 0 (\$1.70)
Common laborers.....			d 7 0 (\$1.70)

* Includes sliding scale of 26¼ per cent.

† Paid at tonnage rate.

‡ Includes cost-of-living bonus of 3s. 4d. (81 cents).

§ Includes cost-of-living bonus of 2s. (49 cents).

The sample passer or tester earns from £5 to £8 (\$24.33 to \$38.93) per week, with an additional variable bonus.

The full-time hours are as follows: First furnace crew, Sunday, 6 p. m. to 10 p. m., and Monday to Friday, 2 p. m. to 6 p. m.; second crew, Sunday to Friday, 10 p. m. to 6 a. m. on the next day; third crew, Monday to Saturday, 6 a. m. to 2 p. m. This makes 5½ shifts and 44 hours for the first crew and 6 shifts and 48 hours for the second and third crews.

Puddling Mills, Birmingham and Manchester

IN BOTH the Midland district, of which Birmingham is the center, and in Manchester, puddling work is done on the eight-hour, three-shift basis when there is sufficient work. In March, 1926, however, only 50 per cent of the mills were working three shifts, and the rest were running only two shifts a day. When the mill is running full time the first shift works six days a week and the second and third shifts five days. At the time of the study many of the mills were operating only three or four days a week. In general the mills were averaging not much more than 50 per cent of the full time.

Output and Division of Earnings

In one shift of eight hours a puddler usually handles four heats of pig iron and in addition one round of scrap iron. In Birmingham each heat of pig iron weighs about 5 hundredweight and the scrap from 3 to 5 hundredweight; in Manchester the weights average 5½ and 3 hundredweight. The heat of scrap is generally paid for at the pig-iron rate rather than at the rate for scrap iron, the latter being paid only for regular shifts on scrap-iron work. In an eight-hour shift, therefore, the Birmingham puddler produces from 23 to 25 hundredweight and the Manchester puddler 25 hundredweight.

The earnings are divided between the puddler and his helper in the proportion of five-eighths and three-eighths; if, however, the work is done "level-handed," i. e., by two puddlers, the earnings are divided

equally. About half of the puddling in both cities is done level handed.

The Manchester mills make some "shoddy," which consists of mixed cast iron, wrought-iron turnings, and light scrap. In this process the iron is melted and the "swarf" (wrought-iron turnings and light scrap) is thrown in. A three-man crew handling shoddy produces from $2\frac{1}{4}$ to $2\frac{1}{2}$ tons in eight hours, the earnings being divided on the basis of 40, 33, and 27 per cent.

The mills in these districts also have a ball furnace in which to reheat the ends of blooms mixed with heavy scrap. While the work is somewhat akin to puddling and busheling, it is a distinct process and is done by a separate crew skilled in the work. In the Manchester district the ball furnace is superseding the busheling process on loose scrap. Material that can not be handled on a peel in a ball furnace, however, must be busheled. Different mixtures are made of puddle pig, shoddy, and ball-furnace iron. These are hammered together and rolled into one mass, the grades being thoroughly blended in the finished rolling.

The production of the ball-furnace crew of three averages $6\frac{1}{2}$ tons per shift in Birmingham and about 7 tons in Manchester. In the former city earnings are divided on the basis of 46, 29, and 25 and in the latter on the basis of 40, 33, and 27 per cent.

In the Midland (Birmingham) district, while a little of the busheling is done by crews of three, usually it is done by two men only. In general 50 per cent of the work is done level-handed and 50 per cent by bushelers with helpers. The production per shift of a crew of two ranges from $1\frac{1}{2}$ to $2\frac{1}{2}$ tons (average $1\frac{3}{4}$ tons). If the work is done level-handed the earnings are divided equally; if by a crew of two in the proportion of five-eighths and three-eighths; and if by a crew of three in the proportion of 40, 30, and 30 per cent.

In Manchester a crew of two men can bushel about 3 tons of light scrap in eight hours.

Very little heavy scrap iron is handled by itself in the Manchester district, the output of the mills being about 20 per cent straight puddled pig iron, 35 per cent shoddy or light scrap, and 45 per cent ball-furnace iron. Much commercial scrap is brought into the district to be reworked.

The iron from the furnace is put under a steam hammer and not through a squeezer. This hammering is called shingling. Generally the work is done by a leading hand with a helper, the earnings being divided five-eighths and three-eighths. In the Birmingham district the hammer handles from 14 to 16 tons per shift; in the Manchester district 16 tons.

At the forge or muck roll there are three men in the crew—the roller, a skilled man who starts the bloom in the rolls; the bull dogger, a semiskilled man who uses the tongs at the back of the roll; and the bar dragger, a semiskilled man who pulls the bar from the rolls. The average rate for the forge roll is about 1s. $7\frac{1}{2}$ d. (40 cents) per ton plus 50 per cent, or 2s. $5\frac{1}{4}$ d. (59 cents). The output is that of the hammer, averaging in Birmingham 15 tons and in Manchester 16 tons.

In Birmingham earnings are divided on the basis of 53, $23\frac{1}{2}$, and $23\frac{1}{2}$; in Manchester on the basis of 53, 24, and 23 per cent.

Each bar mill usually has two heating furnaces, each with its crew of heater and helper. The helper runs the heated bloom from the furnace to the rolls. There are usually four stands of rolls to two furnaces. The output per furnace averages 8 tons per day.

Rates of Wages

In nearly all the processes a standard basic rate per ton is paid, and this rate is increased or decreased $2\frac{1}{2}$ per cent for each change of 5s. (\$1.22) in the selling price of bar iron.

In January, 1913, the full puddling rate was 10s. 9d. (\$2.62) per ton of 2,240 pounds. Owing to the increase of the selling price of iron during the war, the rate increased by January, 1919, to 20s. 3d. (\$4.93) per ton. In February, 1919, the eight-hour day was introduced, and at that time, to make up for the reduced output due to the shorter working-day, the present basic rate of 13s. 6d. (\$3.28) plus the sliding scale was introduced. The sliding scale at that date stood at $107\frac{1}{2}$ per cent on the basic rate, thus raising the rate from 20s. 3d. (\$4.93) to a rate of 13s. 6d. (\$3.28) plus $107\frac{1}{2}$ per cent, or 28s. (\$6.81)—an increase of about $38\frac{1}{4}$ per cent. The average advance in rates for mill workers as a whole owing to the change to the eight-hour day was $33\frac{1}{3}$ per cent. In October, 1920, the sliding scale stood at 265, from which point it then dropped until in March, 1926, it had declined to 50 per cent.

The union officials state that all men on tonnage rates in puddling and in rolling now earn as much in 8 hours as they formerly did in 12 hours, in part due to increased speed in production.

Table 5 shows the standard basic rate per ton, the full rate per ton (with the sliding scale of 50 per cent added), and the earnings per eight-hour shift in puddling mills of the Birmingham and Manchester districts:

TABLE 5.—RATES PER TON AND EARNINGS PER SHIFT IN VARIOUS OCCUPATIONS IN PUDDLING MILLS, BIRMINGHAM AND MANCHESTER

Birmingham

Process or occupation	Standard basic rate per ton of 2,240 pounds	Full rate ¹ per ton of 2,240 pounds	Earnings per shift of 8 hours
Puddling pig iron:	s. d.	s. d.	s. d.
Puddler.....	8 5¼ (\$2.05)	12 7¼ (\$3.08)	14 6¼ (\$3.54) to 15 9¼ (\$3.85)
Puddler's helper.....	5 0¼ (\$1.23)	7 7¼ (\$1.85)	8 8¼ (\$2.12) to 9 6 (\$2.31)
Total.....	13 6 (\$3.28)	20 3 (\$4.93)	23 3½ (\$5.67) to 25 3¼ (\$6.16)
Level-hand work, per man.....	6 9 (\$1.64)	10 1½ (\$2.46)	11 7 (\$2.82) to 12 7¼ (\$3.08)
Bushelling heavy scrap.....	12 0 (\$2.92)	18 0 (\$4.38)	(2)
Bushelling light scrap.....	10 6 (\$2.50)	15 9 (\$3.83)	(2)
Reheating in ball furnace:			
First hand.....	2 2½ (\$0.54)	3 3¼ (\$0.81)	13 6¾ (\$3.29)
Second hand.....	1 4½ (\$0.33)	2 0¼ (\$0.50)	13 4¾ (\$3.25)
Third hand.....	1 2 (\$0.28)	1 9 (\$0.43)	11 4½ (\$2.77)
Total.....	4 4 9 (\$1.16)	7 1½ (\$1.73)	46 3¼ (\$11.27)

¹ Includes sliding scale of 50 per cent.

² Data not available.

³ Average; rate varies from 8s. 6d. (\$2.07) to 13s. 6d. (\$3.28).

⁴ Average; rate varies from 4s. 6d. (\$1.10) to 6s. (\$1.46) or from 6s. 9d. (\$1.64) to 9s. (\$2.19).

TABLE 5.—RATES PER TON AND EARNINGS PER SHIFT IN VARIOUS OCCUPATIONS IN PUDDLING MILLS, BIRMINGHAM AND MANCHESTER—Continued

Process or occupation	Standard basic rate per ton of 2,240 pounds	Full rate per ton of 2,240 pounds	Earnings per shift of 8 hours
	s. d.	s. d.	s. d.
Hammering (shingling):			
Leading hand.....	12 $\frac{3}{4}$ (\$0.26)	18 $\frac{1}{4}$ (\$0.37)	22 10 $\frac{1}{4}$ (\$5.56)
Helper.....	7 $\frac{1}{4}$ (\$0.15)	11 (\$0.22)	13 8 $\frac{1}{2}$ (\$3.34)
Total.....	1 7 $\frac{1}{2}$ (\$0.40)	2 5 $\frac{1}{4}$ (\$0.59)	36 6 $\frac{3}{4}$ (\$8.90)
Bloom boy.....			* 4 5 (\$1.07)
Forge or muck rolling:			
Roller.....	10 $\frac{1}{4}$ (\$0.21)	15 $\frac{1}{4}$ (\$0.31)	17 8 $\frac{1}{2}$ (\$4.31)
Bull dogger.....	4 $\frac{1}{2}$ (\$0.09)	6 $\frac{1}{2}$ (\$0.14)	8 7 $\frac{1}{2}$ (\$2.09)
Bar dragger.....	4 $\frac{1}{2}$ (\$0.09)	6 $\frac{1}{2}$ (\$0.14)	8 7 $\frac{1}{2}$ (\$2.09)
Total.....	1 7 $\frac{1}{2}$ (\$0.40)	2 5 $\frac{1}{4}$ (\$0.59)	36 6 $\frac{3}{4}$ (\$8.90)
Weighing, level-hand, per man:			
Tonnage basis.....	3 $\frac{1}{2}$ (\$0.07)	5 $\frac{1}{4}$ (\$0.11)	12 0 (\$2.92)
Time rate when not on tonnage.....			9 9 (\$2.37)
Common labor.....			6 7 (\$1.60)

Manchester

Puddling pig iron:	s. d.	s. d.	s. d.
Puddler.....	8 5 $\frac{1}{4}$ (\$2.05)	12 7 $\frac{1}{8}$ (\$3.08)	15 10 (\$3.85)
Puddler's helper.....	5 0 $\frac{1}{4}$ (\$1.23)	7 7 $\frac{1}{8}$ (\$1.85)	9 5 $\frac{1}{4}$ (\$2.31)
Total.....	13 6 (\$3.28)	20 3 (\$4.93)	25 3 $\frac{3}{4}$ (\$6.16)
Level-hand work, per man.....	6 9 (\$1.64)	10 1 $\frac{1}{2}$ (\$2.46)	12 8 (\$3.08)
Puddling shoddy: ^a			
Puddler.....	5 2 $\frac{3}{4}$ (\$1.22)	7 9 $\frac{1}{8}$ (\$1.90)	18 6 $\frac{1}{4}$ (\$4.51)
First helper.....	4 3 $\frac{7}{8}$ (\$1.71)	6 5 $\frac{1}{4}$ (\$1.57)	15 3 $\frac{3}{8}$ (\$3.72)
Second helper.....	3 6 $\frac{1}{4}$ (\$0.85)	5 3 $\frac{1}{2}$ (\$1.28)	12 6 (\$3.04)
Total.....	13 0 (\$3.16)	19 6 (\$4.74)	46 3 $\frac{5}{8}$ (\$12.27)
Heating heavy scrap.....	12 0 (\$2.92)	18 0 (\$4.38)	(?)
to	13 0 (\$3.16)	19 6 (\$4.74)	
Busheling light scrap:			
Puddler.....	6 6 $\frac{3}{4}$ (\$1.60)	9 10 $\frac{1}{8}$ (\$2.40)	29 6 $\frac{3}{8}$ (\$7.19)
Helper.....	3 11 $\frac{1}{4}$ (\$0.96)	5 10 $\frac{1}{8}$ (\$1.43)	17 8 $\frac{5}{8}$ (\$4.31)
Total.....	10 6 (\$2.56)	15 9 (\$3.83)	47 3 (\$11.50)
Ball furnaces:			
Piling and heating—			
First hand.....	1 10 $\frac{3}{4}$ (\$0.45)	2 9 $\frac{3}{4}$ (\$0.68)	19 7 $\frac{1}{4}$ (\$4.77)
Second hand.....	1 6 $\frac{1}{4}$ (\$0.37)	2 3 $\frac{1}{4}$ (\$0.55)	16 2 (\$3.93)
Third hand.....	1 3 $\frac{1}{4}$ (\$0.31)	1 10 $\frac{1}{4}$ (\$0.46)	13 2 $\frac{1}{4}$ (\$3.22)
Total.....	4 8 (\$1.14)	7 0 (\$1.70)	49 0 (\$11.92)
Heating only—			
First hand.....	2 1 (\$0.51)	3 11 $\frac{1}{2}$ (\$0.76)	(?)
Second hand.....	1 3 (\$0.30)	1 10 $\frac{1}{2}$ (\$0.46)	(?)
Total.....	3 4 (\$0.81)	5 0 (\$1.22)	(?)
Hammering (shingling, level-hand) per man.....	9 $\frac{3}{4}$ (\$0.20)	1 2 $\frac{5}{8}$ (\$0.28)	19 6 (\$4.74)
Bloom boy.....			* 6 0 (\$1.46)
Forge or muck rolling:			
Roller.....	10 $\frac{1}{4}$ (\$0.21)	15 $\frac{1}{4}$ (\$0.31)	20 8 (\$5.03)
Bull dogger.....	4 $\frac{1}{2}$ (\$0.09)	7 (\$0.14)	9 4 $\frac{1}{4}$ (\$2.23)
Bar dragger.....	4 $\frac{1}{2}$ (\$0.09)	6 $\frac{1}{4}$ (\$0.14)	8 11 $\frac{1}{4}$ (\$2.18)
Total.....	1 7 $\frac{1}{2}$ (\$0.40)	2 5 $\frac{1}{4}$ (\$0.59)	39 0 (\$9.49)

* Date not available.

* Wage of this employee is paid by roller; if on a tonnage basis, is paid rate equal to half that received by bull dogger.

* "Shoddy" is mixed cast iron, wrought-iron turnings, and light scrap; wrought-iron turnings and light scrap are known as "swarf."

† Average; rate varies from 14s. 6d. (\$3.53) to 19s. 9d. (\$4.81).

‡ Average; rate varies from 4s. 6d. (\$1.10) for lads to 8s. 3d. (\$2.01) for men.

The rates paid in a typical 10-inch-bar mill in both districts are as follows:

TABLE 6.—RATES PAID IN TYPICAL 10-INCH-BAR MILL IN BIRMINGHAM AND MANCHESTER

Process or occupation	Standard basic rate per ton of 2,240 pounds	Full rate ¹ per ton of 2,240 pounds	Earnings per shift of 8 hours
Heating:	s. d.	s. d.	s. d.
Heater.....	2 0 (\$0.49)	3 0 (\$0.73)	24 0 (\$5.84)
Helper.....	1 0 (\$0.24)	1 6 (\$0.37)	12 0 (\$2.92)
Total.....	3 0 (\$0.73)	4 6 (\$1.10)	36 0 (\$8.76)
Rolling:			
Bolting rolls—			
Top man.....	8¾ (\$0.18)	1 1¼ (\$0.27)	17 6 (\$4.26)
Bottom man.....	8¾ (\$0.18)	1 1¼ (\$0.27)	17 6 (\$4.26)
Strand rolls—			
Top man.....	5½ (\$0.10)	7½ (\$0.16)	10 3 (\$2.49)
Bottom man.....	5½ (\$0.10)	7½ (\$0.16)	10 3 (\$2.49)
Oval rolls, hand.....	4¼ (\$0.09)	6¾ (\$0.13)	8 6 (\$2.07)
Guide rolls, hand.....	4 (\$0.08)	6 (\$0.12)	8 0 (\$1.95)
Chief roller.....	1 9 (\$0.43)	2 7½ (\$0.64)	42 0 (\$10.22)
Total.....	4 9 (\$1.16)	7 1½ (\$1.73)	114 0 (\$27.74)

¹ Includes sliding scale of 50 per cent.

² Average; rate varies from 2s. 10d. (69 cents) to 3s. 6d. (85 cents).

A higher rate is paid for all sizes under one-half inch, round or square, and for wide flat bars of less than one inch.

Rates furnished by an employer in the Birmingham district vary slightly in certain processes from the above. According to him, the full rates for those processes range as follows:

	Full rate per ton
	s. d.
Busheling all scrap.....	13 6 (\$3.28)
	to
Hammering (shingling).....	18 0 (\$4.38)
Forge rolling.....	2 4½ (\$0.58)
	2 4½ (\$0.58)

He states that typical divisions of earnings are, for hammering, 45, 34, and 21 per cent, and for forge rolling, 37, 23, 14, 14, and 12 per cent.

In his opinion, the hammermen average 18 to 20 tons per shift, the forge rollers 18 to 25 tons, and the puddlers 4 heats and occasionally 5. With these rates of pay and output, the earnings per shift would be as follows:

	Earnings per shift
	s. d.
Puddling pig iron:	
Puddler.....	12 7¾ (\$3.08)–15 9¾ (\$3.85)
Helper.....	7 7½ (\$1.85)–9 6 (\$2.31)
Level-hand work, per man.....	10 11½ (\$2.46)–12 7½ (\$3.08)
Hammering:	
First hand.....	19 27½ (\$4.68)–21 4½ (\$5.20)
Second hand.....	14 6¼ (\$3.53)–16 1¾ (\$3.93)
Third hand.....	8 11¾ (\$2.18)–9 11¾ (\$2.43)
Forge or muck rolling:	
Roller.....	15 10 (\$3.85)–21 11 (\$5.33)
Helper.....	9 10 (\$2.39)–13 7½ (\$3.32)
Bull dogger and straightener, each.....	5 11¾ (\$1.46)–8 3¾ (\$2.02)
Trollier.....	5 11½ (\$1.25)–7 1½ (\$1.73)

Working Hours

The full-time hours are, for the first crew, from 6 a. m. to 2 p. m., Monday to Saturday; for the second, from 2 p. m. to 10 p. m., Monday to Friday; and for the third, from 10 p. m. to 6 a. m., Monday to Friday. Thus, the first crew works 6 days and 48 hours per week, while the second and third crews work 5 days and 40 hours. This makes a total of 16 shifts per week and an average per crew of $42\frac{2}{3}$ hours per week. Overtime may be required any time between 2 p. m. Saturday and 6 a. m. Monday, and is paid for at the rate of time and a half or double rates.

Tin-Bar Manufacture, Swansea, Wales

BOTH melting shops and rolling mills in the tin-bar manufacturing industry in Swansea work eight hours.

A plant of one to three furnaces usually has one charging-machine operator and one of four or five furnaces two operators. The furnaces vary in capacity from 30 to 60 tons, a typical furnace producing about 450 tons in a full week of 17 shifts, or an average production per shift of 26.5 tons. About 60 per cent of the output is produced by the acid process and about 40 per cent by the basic process.

For the whole group of furnaces there is a sample passer who supervises the charging and tapping. No door boy is employed, as the melter tends the door of the furnace. One pitman is employed on each furnace, and he strips the ingot in addition to attending to the pit.

Although working only 17 shifts per week, the teemer and ladlemen are paid for 18 shifts.

The ingot may go from the furnace either to a soaking pit or to a reheating furnace. The force at the soaking pit usually consists of two heaters, two helpers, and two cover lifters, while that of a typical four-furnace reheating plant usually consists of two ballers or heaters, two gasmen, 2 pull-up boys operating the furnace doors, two pusher boys, and one coal man. The output of this group of furnaces averages about 160 tons per shift, and the same amount is handled by the rolling crew of four men, consisting of roller, rougher, two barrers, and shearer.

Wage Rates

The following table shows the rates paid in the manufacture of tin bars in this city:

TABLE 7.—RATES PAID IN TIN-BAR MANUFACTURING PLANTS IN SWANSEA, WALES

Process or occupation	Basic rate	Full rate ¹	Earnings per shift
	<i>Per shift</i>	<i>Per shift</i>	
	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
Stockers.....	6 6 (\$1.58)	7 9½ (\$1.90)	7 9½ (\$1.90)
	to	to	to
	7 0 (\$1.70)	8 4¼ (\$2.04)	8 4¼ (\$2.04)
Charging-machine operator.....	6 9 (\$1.64)	8 1¼ (\$1.97)	10 2½ (\$2.48)
			to
			12 0 (\$2.92)

¹ Includes sliding scale of 20 per cent.

² Per shift, but employee works on tonnage basis; rate may range as high as 9s. (\$2.19) per shift.

TABLE 7.—RATES PAID IN TIN-BAR MANUFACTURING PLANTS IN SWANSEA, WALES—Continued

Process or occupation	Basic rate	Full rate ¹	Earnings per shift
Acid process:	<i>Per ton</i>	<i>Per ton</i>	
First melter	9½¢ (\$0.19)	11¼¢ (\$0.23)	22 1¼¢ (\$5.38)
Second melter	6¾¢ (\$0.14)	8¼¢ (\$0.16)	15 8¼¢ (\$3.82)
Third melter			8 7½¢ (\$1.86)
Basic process:			
First melter	10¾¢ (\$0.22)	12½¢ (\$0.26)	28 5¼¢ (\$6.93)
Second melter	7¼¢ (\$0.15)	8½¢ (\$0.18)	19 2½¢ (\$4.67)
Third melter	5¢ (\$0.10)	6¢ (\$0.12)	13 3¢ (\$3.22)
Pitman	7¢ (\$0.14)	8½¢ (\$0.17)	18 6½¢ (\$4.51)
Pitman's helper	2¢ (\$0.04)	2½¢ (\$0.05)	5 3½¢ (\$1.29)
Teemer or pourer			4 18 7¢ (\$4.52)
Ladleman, first			4 9 3¼¢ (\$2.26)
Ladleman, second			4 8 0¢ (\$1.95)
Pit craneman			7 9 8¼¢ (\$2.36)
Soaking pit:			
Heaters	1.625 (\$0.033)	1.95 (\$0.04)	8 17 9¢ (\$4.32)
Helpers	1.0 (\$0.02)	1.20 (\$0.024)	8 10 11¢ (\$2.66)
Cover lifters	0.5 (\$0.01)	0.75 (\$0.015)	8 6 9½¢ (\$1.65)
Reheating furnace:			
Baller (heater)	1.5625 (\$0.03)	1.875 (\$0.038)	25 0¢ (\$6.08)
Gasman	1.0 (\$0.02)	1.2 (\$0.024)	16 0¢ (\$3.89)
Pull-up boy	0.33 (\$0.0067)	0.396 (\$0.008)	5 4¢ (\$1.30)
Pusher boy	0.43 (\$0.0087)	0.516 (\$0.01)	6 10½¢ (\$1.67)
Coal man			9 7 6¢ (\$1.83)
Locomotive engineers			19 7¼¢ (\$2.34)
Switchmen			18 4¾¢ (\$2.04)
Laborers			9 7 6¢ (\$1.83)
Rolling:			
Roller	1.8125 (\$0.0365)	2.175 (\$0.044)	29 0¢ (\$7.06)
Rougher	1.125 (\$0.0228)	1.35 (\$0.027)	18 0¢ (\$4.38)
Barrer, first	0.90 (\$0.018)	1.08 (\$0.022)	14 4¾¢ (\$3.50)
Barrer, second	0.75 (\$0.015)	0.90 (\$0.018)	12 0¢ (\$2.92)
Shearer	1.0 (\$0.02)	1.20 (\$0.024)	16 0¢ (\$3.89)

¹ Includes sliding scale of 20 per cent.² Or at rate of £2 3s. 2½d. (\$10.51) per week, of which 17s. 2d. (\$4.18) is paid by first melter, 12s. 2d. (\$2.96) by second melter, and 6s. 8d. (\$0.65), plus 20 per cent of the whole amount, by the firm. In some cases the whole rate is paid by the employer.³ On basis of 8s. 4d. (\$2.03) per shift and 1d. (2 cents) per ton plus sliding scale.⁴ On basis of 6s. 3d. (\$1.52) per shift, and ¼ penny (½ cent) per ton plus scale.⁵ On basis of 5s. 3d. (\$1.28) per shift, and ¼ penny (½ cent) per ton plus scale.⁶ On basis of 6s. 4d. (\$1.54) per shift, and 0.261d. (½ cent) per ton plus scale.⁷ Computed from data secured in a representative plant on basis of production of 654 tons per week.⁸ Includes 30 per cent extra because of employee's being within category of "lower-paid men," receiving 30s. (\$7.30) or less per week.

The steel plants also employ fitters, machinists, and blacksmiths, who are paid £3 7s. 6d. (\$16.42) per week of 44 hours. Bricklayers are paid at the rate of 1s. 7½d. (\$0.39½) per hour. None of these employees receive the benefit of the sliding scale.

Hours of Work

In the melting shop the first crew works from midnight on Sunday to 6 a. m. Monday, and on the five succeeding days from 10 p. m. to 6 a. m., a total of 6 shifts and 46 hours per week; the second crew from 6 a. m. to 2 p. m. Monday to Saturday—6 shifts and 48 hours; and the third crew from 2 p. m. to 10 p. m. Monday to Friday—5 shifts and 40 hours. The three crews combined thus work 17 shifts and 134 hours per week, an average of 44½ hours per crew per week.

In the bar mills the first crew works from 6 a. m. to 2 p. m. Monday to Friday, and from 6 a. m. to 1 p. m. Saturday, a total of 6 shifts and 47 hours; the second crew from 2 p. m. to 10 p. m., Monday to Friday, a total of 5 shifts and 40 hours, and the third shift from 10 p. m. to 6 a. m. for five nights, beginning at 10 p. m. Monday and ending at 6 a. m. Saturday, a total of 5 shifts and 40 hours.

Together the three crews work 16 shifts and 127 hours, an average of $42\frac{1}{3}$ hours per shift per week.

The men rotate on shifts each week. A period of 20 minutes per shift is allowed each man for mealtime.

Tin-Plate Mills, Swansea, Wales

Output, and Division of Earnings

THE bar cutters cut the long bars to the length required for the tin-plate mill. The rates for this operation vary according to conditions, and the earnings are divided among the four members of the cutting crew in the proportion of 30, 25, 25, and 20 per cent. Usually the men are pieceworkers paid by the box, although in a few cases they are paid tonnage rates. A crew of four can produce about 3,600 boxes in 47 hours, or about 612.8 boxes in an eight-hour shift.

The rolling-mill unit consists of a set of breakdown rolls and a set of finishing rolls (a plant may have several mill units), and is manned by a crew of six, which produces on an average 60 boxes per shift. The three crews combined produce from 945 to as high as 980 boxes in a full week.

The shearer, openers (three for each mill), and picklers work only on the day shift, but handle in that time the output of three crews—180 boxes. The picklers generally work only 6 to $6\frac{1}{2}$ hours and may not work on Saturday. Each two shearers have one helper and the pickler has four helpers.

The output of the tanners ranges from 40 to 70 boxes in 8 hours, the average being about 45. No redipping is being done in Swansea now. Mechanical equipment is displacing the risers, and 80 per cent of the tin plate is branned and dusted automatically. The other 20 per cent is branned by machine and dusted in a machine fed by hand. Young men and young women are employed on this work, but the women only on day shifts. The dusting machine has several rolls covered with coarse cloth which cleans the surface of the tin.

Sorters are also day workers, with an output of about 945 boxes per week. There is one sorter for each hot mill.

Rates of Pay

The scale in the tin-plate mills moves $1\frac{1}{4}$ per cent for each 2s. 6d. (\$0.61) change in the price of steel bar as determined by accountants hired jointly by the employers and the union to audit the company's books. Although at present the price of steel bar is so low as to make no addition to the basic rate, the employers are continuing the payment of a $7\frac{1}{2}$ per cent sliding scale.

The base rates are figured on the box as the unit, a fixed rate being paid per box, or per dozen, or per hundred boxes. The base box of black plate—that is, the plate before it is tinned—is the equivalent of 225 sheets 10 inches by 14 inches, having a total area of 31,500 square inches. Tin plate sizes run up to 54 by 28 inches. A box of black plate weighs 110 pounds at the mill, but there is a loss in pickling. After pickling and tinning the base box weighs 108 pounds.

A long ton of steel will yield about 16½ boxes of finished tin plates. The rest is scrap.

Table 8 shows the standard and full rates of pay and the average earnings per shift in the various tin-plate occupations:

TABLE 8.—BASIC AND FULL RATES OF PAY AND EARNINGS PER SHIFT IN TIN MILLS IN SWANSEA, WALES

Process or occupation	Basic rate	Full rate ¹	Earnings per shift of 8 hours
	<i>Per 100 boxes</i>	<i>Per 100 boxes</i>	
Bar cutting:	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
First hand, male.....	2 0½ (\$0.49)	2 2½ (\$0.53)	13 4¼ (\$3.25)
Second hand, male.....	1 8½ (\$0.41)	1 9½ (\$0.44)	11 1½ (\$2.71)
Third hand, male.....	1 8½ (\$0.41)	1 9½ (\$0.44)	11 1½ (\$2.71)
Fourth hand, male.....	1 4¼ (\$0.33)	1 5½ (\$0.35)	8 10¼ (\$2.16)
Total.....	6 9¼ (\$1.65)	7 3 (\$1.76)	44 6½ (\$10.84)
Openers, female.....	3 2¼ (\$0.79)	3 5½ (\$0.84)	6 3 (\$1.52)
Packers, male.....	5 11¼ (\$1.44)		10 0 (\$2.43)
			to
			11 0 (\$2.68)
Rolling mill:	<i>Per dozen boxes</i>	<i>Per dozen boxes</i>	
Roller, male.....	4 3¼ (\$1.04)	4 7 (\$1.12)	22 11 (\$5.58)
Doubler, male.....	3 5¼ (\$0.84)	3 8¼ (\$0.90)	18 5¼ (\$4.49)
Furnacer, male.....	3 2¾ (\$0.79)	3 5½ (\$0.84)	17 3½ (\$4.21)
First helper, male.....	3 0¼ (\$0.74)	3 3 (\$0.79)	16 3 (\$3.95)
Second helper, male.....	2 1 (\$0.51)	2 2¾ (\$0.54)	11 1¾ (\$2.71)
Behinder (catcher) male.....	1 9¼ (\$0.43)	1 10¾ (\$0.46)	9 5¾ (\$2.31)
Shearer, male.....	1 4¼ (\$0.33)	1 5½ (\$0.35)	21 10½ (\$5.32)
Helper, male.....	2 6 (\$0.61)	2 8¼ (\$0.65)	3 4¼ (\$0.82)
Pickling:			
Pickler, male.....			² 100 0 (\$24.33)
Helpers, male or female.....			³ 8 8¼ (\$2.12)
	<i>Per box</i>	<i>Per box</i>	
Tinners, male.....	4½ (\$0.08½)	4.4 (\$0.089)	16 6 (\$4.01)
Risers, male.....	1½ (\$0.028)	1.85 (\$0.03¾)	18 0¾ ⁽⁴⁾ (\$1.96)
Branners, male or female.....			⁵ 4 0¾ (\$0.98)
			to
Dusters, male.....			⁵ 4 8½ (\$1.15)
Sorters, male.....	1¼ (\$0.025)	1.34 (\$0.027)	20 1¼ (\$4.89)
Laborers.....			⁶ 7 4½ (\$1.79)

¹ Includes sliding scale of 7½ per cent.

² Per week.

³ On basis of 6s. 6d (\$1.58) plus 25 per cent plus scale.

⁴ Data not available.

⁵ Includes extra payment of 25 per cent plus scale.

⁶ On basis of 5s. 6d. (\$1.34) plus 25 per cent plus scale.

In a four-mill plant there are usually eight annealers who work in a gang, dividing the earnings as they may agree. These earnings average from £5 (\$24.33) per week for the head man to £2 18 s. (\$14.11) for the lowest-paid man. The rate for packing shown in Table 8 is the rate for plain mailing. Where extra work, such as hooping, marking in an unusual way, or tin lining, is done, the earnings average about £4 10s. (\$21.90) per week, or 15s. (\$3.65) per shift. Time workers on the evening and night shifts are paid at one and one-fifth the regular rate, so that in 40 hours they earn about the same as the workers on the day shift who work 47 hours. This includes day labor at pickling, wet wheeling, dusting, general labor, etc.

Hours of Work

At the time of the agent's visit (March, 1926) about 80 per cent of the mills were in operation; the others were temporarily closed down awaiting orders. About 20 per cent of the mills have for some years

been working four 6-hour shifts and a few six 4-hour shifts because of the depression in the trade and in order to furnish work for as many men as possible.

When the mills are working they run continuously for the 24 hours, as good work can not be done with intermittent operation. The regular hours in most mills are: First crew, 6 a. m. to 2 p. m., Monday to Friday, and 6 a. m. to noon, Saturday; second crew, from 2 p. m. to 10 p. m., Monday to Friday; and third crew, from 10 p. m. to 6 a. m., Monday to Friday. Thus, the first crew works 6 days and 46 hours per week, and the second and third crews 5 days and 40 hours, a total of 15 full shifts and one three-quarter shift, or an average of 42 hours per week per crew.

The bar cutters usually work only the day shift, and their hours differ from the regular mill hours, being from 7 to 8.30 a. m., 9 a. m. to 1 p. m., and 2 to 5 p. m., Monday to Friday, and from 7 to 8.30 a. m. and 9 a. m. to noon on Saturday, making a working week of 47 hours.

The six millmen rotate in work and rest periods. When the plate is to be finished 8 sheets thick the rotation of work and rest is as follows: Starting with the heated iron—

Iron.....	Behinder takes out iron from furnace. Roller rolls. Second helper works behind rolls. First helper places singles back in furnace. Doubler rests. Furnace man rests.
Singles.....	Second helper takes from furnace. First helper rolls. Behinder works behind rolls. Doubler doubles. Furnace man places plates back in furnace. Roller rests.
Doubles.....	First helper takes from furnace. Roller rolls. Behinder works behind rolls. Doubler doubles and trims. First helper puts back in furnace. Furnace man rests. Second helper rests.
Fours.....	Furnace man takes from furnace. Roller rolls. Second helper works behind rolls. First helper opens forms. Doubler doubles and trims. Furnace man puts in furnace. Behinder rests.
Eights.....	Furnace man takes from furnace. Roller rolls. Second helper works behind rolls. Behinder assists second helper. First helper piles iron. Doubler puts iron in furnace.

Most of the finishing is done in eights. When rolling in other than eights there is a different rotation in work and rest but the same principle is applied.

Weekly Earnings, Great Britain

THE Iron and Steel Confederation of England furnished the following statement as to the range of weekly earnings in steel plants in Great Britain:

Melting:	£	s.	d.	£	s.	d.
Steel melters, first hands-----	7	11	6	(\$36.86)-10	14	7½ (\$52.22)
Steel melters, second hands--	5	1	0	(\$24.58)- 6	18	10½ (\$33.79)
Steel melters, third hands---	4	8	4½	(\$21.50)- 5	7	3¾ (\$26.11)
Steel melters' helpers-----	2	13	0¼	(\$12.90)- 3	3	1½ (\$15.36)
Pourers-----	4	8	4½	(\$21.50)- 5	1	0 (\$24.58)
Pitmen-----	4	8	4½	(\$21.50)- 6	6	3 (\$30.72)
Pit helpers-----	2	10	6	(\$12.29)- 3	3	1½ (\$15.36)
Charge wheelers-----	2	4	2¼	(\$10.75)- 2	16	9¾ (\$13.82)
Gasmen-----	2	4	2¼	(\$10.75)- 2	10	6 (\$12.29)
Ladle men-----	1	17	10½	(\$9.22)- 3	15	9 (\$18.43)
Cranemen-----	1	17	10½	(\$9.22)- 5	1	0 (\$24.58)
Laborers-----	1	18	2¼	(\$9.29)		
Rolling:						
Rollers-----	5	13	7½	(\$27.65)-12	12	6 (\$61.44)
Roughers-----	3	15	9	(\$18.43)- 6	6	3 (\$30.72)
Finishers-----	2	16	9¾	(\$13.82)- 4	2	0¾ (\$19.97)
Heaters-----	3	9	5¼	(\$16.90)- 5	13	7½ (\$27.65)
Loaders-----	2	10	6	(\$12.29)- 3	15	9 (\$18.43)
Cranemen-----	2	10	6	(\$12.29)- 3	9	5¼ (\$16.90)
Engineers-----	2	4	5½	(\$10.82)- 3	3	1½ (\$15.36)
Firemen-----	1	17	10½	(\$9.22)- 2	16	9¾ (\$13.82)
Miscellaneous-----	1	15	4¼	(\$8.60)- 2	10	6 (\$12.29)

Machinery for Adjustment of Wages and Working Conditions

BELOW are reproduced several documents illustrating the machinery for and methods of adjustment of wages and working conditions in the industry.

RULES AND INSTRUCTIONS OF THE MIDLAND IRON & STEEL WAGES BOARD¹

Rules

1. The title of the board shall be "The Midland Iron and Steel Wages Board."
2. The objects of the board shall be to discuss, and, if necessary, to arbitrate on wages or any other matter affecting the respective interests of the employers or operatives, and by conciliatory means to interpose its influence to prevent disputes and put an end to any that may arise.
3. The president shall be a person of position not connected with the iron trade, chosen by the board, whose duty it shall be to attend at special meetings, upon being requested by the board to do so. He shall take no part in the discussions, beyond asking for an explanation for the guidance of his own judgment, and if no settlement can be made, he shall give his adjudication.
4. The board shall consist of one employer and one operative representative from each works joining the board—including the works attached to the sheet trade committee. Where two or more works belong to the same proprietors, each works may claim to be represented on the board.
5. The employers shall be entitled to send one duly accredited representative from each works to each meeting of the board.
6. The operatives of each works shall elect a representative by ballot, at a meeting to be held for the purpose, on such day or days as the standing committee may fix, in the month of December in each year, the name of such representative, and of the works he represents being given in to the secretaries on or before January 1 next ensuing.

¹ As of Apr. 2, 1924.

The secretaries shall, in the month of November in each year, issue a notice to each works connected with the board, requesting the election of representatives in the month of December, and shall supply the requisite forms.

7. If any operative representative die, or resign, or cease to be qualified by terminating his connection with the works he represents, a successor shall be chosen within one month, in the same manner as is provided in the case of annual elections.

8. The operatives' representatives so chosen shall continue in office for the calendar year immediately following their election, and shall be eligible for reelection. An operatives' representative shall not be prejudiced in his employment by reason of him holding such position. In the event of the question of the dismissal from his employment arising the employer shall seven days prior to giving notice inform the employers' secretary of his intention in writing: *Provided*, This shall not prejudice the right of the employer to give proper effect to the mutually recognized rules of the works with regard to the terms of contract of employment.

9. Each representative shall be deemed fully authorized to act for the works which he represents, and the decision of a majority of the board—or, in case of equality of votes, of its chairman—shall be binding upon the employers and operatives of all works connected with the board.

10. The chairman shall be appointed by the employers' section from among their body. The vice chairman shall be appointed by the operatives' section from among their body. A secretary shall be appointed by the employers, and a secretary, together with three area secretaries, shall be appointed by the operatives. The Midland area secretary shall be assistant secretary for the operatives' side of the board. A treasurer and a professional auditor shall be appointed by the board. Either of the secretaries, the treasurer, or auditor may be dismissed by a resolution of the respective bodies appointing them, subject to three months' notice.

11. The board shall meet for the transaction of business in February of each year; but, by order of the standing committee, the secretaries shall convene a meeting of the board at any time. The circular calling such meeting shall express, in general terms, the nature of the business for consideration.

12. At the annual meeting of the board a standing committee shall be appointed as follows: The employers shall nominate 18 of their number, exclusive of the chairman, and the operatives 18 of their number, exclusive of the vice chairman; of these, one employer and one operative shall be nominated by the members of the sheet trade committee.

If at a meeting of the board or standing committee any employer's representative, or any operative's representative be absent, the employers' secretary, or the operatives' secretary shall vote for such absent member or members as the case may be.

The standing committee shall have power to fill up all vacancies in their own committee that may arise during the year.

13. The standing committee shall meet for the transaction of business prior to the yearly meeting, and in addition as often as business requires. The time and place of meeting shall be arranged by the secretaries in default of any special direction.

14. The chairman shall preside over all meetings of the board, and of the standing committee, except in cases that require the president. In the absence of the chairman, a temporary chairman shall be elected by the meeting.

15. All questions requiring investigation shall be submitted to the standing committee in writing, and shall be supplemented by such verbal evidence or explanation as they may think needful. The complaint shall be considered as officially before the board from the date of receiving the case.

16. Failing agreement between the employers' and operatives' representatives according to the instructions, all questions shall be referred to the standing committee, who shall investigate and have power to settle all matters so referred to it, except the selection of a president, which shall be referred to a special meeting of the full board.

In case the standing committee fails to agree, the question in dispute shall be submitted to the president, whose decision shall be binding on both parties, but in all cases witnesses from the works affected may be summoned to attend and give evidence before the president in support of their case.

17. No case which the standing committee is called upon to deal with, or subject of dispute, shall be brought forward at any meeting unless notice thereof

has been given to the secretaries seven clear days before such meeting, but this is not to apply to routine business or to matters, the investigation of which may be considered necessary by the standing committee.

18. All votes shall be taken at the board and standing committee by show of hands, unless any member calls for a ballot.

19. When the question is one of a general rise or fall of wages, a meeting of the standing committee shall be held, who may call the whole board together if necessary, and in case no agreement can be arrived at, it shall be referred to the president, whose decision shall be final and binding on all parties.

19. (a) In the event of a dispute arising at any works on a matter coming within the jurisdiction of the board, and circumstances arise which appear to justify the calling of an emergency meeting of the standing committee, it shall be competent for the chairman, on the facts being placed before him by either or both of the board secretaries, to call a meeting of the committee to consider the dispute and to decide on the steps to be taken to deal therewith. The discretion of the chairman as to calling an emergency meeting of the standing committee and the notice to be given, shall not be prejudiced by the provisions of rule 17 nor by the absence of a statement as provided by instruction 6 of these rules.

20. The expenses incurred by the board shall be borne equally by the employers and operatives, and it shall be the duty of the standing committee to establish the most convenient arrangements for collecting what may be needed to meet such expenses.

The employers' contribution shall be a sum equal to the aggregate sum paid by the operatives at each of the works.

The standing committee may vary the rate of contribution from time to time if needful.

The banking account of the board shall be kept in the name of the treasurer, and all accounts shall be paid by check signed by him.

21. The sum of 20s. shall be paid to each member of the board, both employers and operatives, plus the scale with a limit of 100 per cent for each day's attendance and third-class railway fare both ways.

22. The operatives' representative shall be paid for time necessarily lost in attending to difficulties at the works to which he belongs, upon a certificate signed by the vice chairman and the operatives' secretary, at the rate of 10s. for each shift so lost.

22. (a) It shall not be permissible for the employers and/or operatives at any works coming within the jurisdiction of the board, to enter into arrangements which conflict with the decisions of the board or of its standing committee, so far as general trade agreements are concerned.

23. Should it be proved to the satisfaction of the standing committee that any member of the board has used his influence in endeavoring to prevent the decisions of the board or standing committee from being carried out, he shall forthwith cease to be a representative, and shall be liable to forfeit any fees which might otherwise be due to him from the board.

24. If the employers and operatives at any works not connected with the board should desire to join the same, such desire shall be notified to the secretaries, and by them to the standing committee, who shall have power to admit them to membership on being satisfied that these rules have been or are about to be complied with.

24. (a) If the employers and operatives at any works desire to leave the board three months' joint notice shall be given as from the first Monday in any calendar month. Should the desire to leave the board apply only to one of the parties, the party concerned shall give three clear months' notice as aforesaid to the secretary on their side of the board, and a similar notice to the board secretary of the other party. Membership of the board shall not be held to have terminated until such notice is given as herein provided, nor either party be relieved of their obligations under these rules.

25. No alteration or addition shall be made to these rules except at the meeting of the board to be held in February in each year, and unless notice in writing, of the proposed alteration, be given to the secretaries at least one calendar month before such meeting. The notice convening the annual meeting shall state fully the nature of any alteration that may be proposed.

26. The standing committee shall have power to make from time to time, such by-laws as they may consider necessary, provided the same are not inconsistent with or at variance with these rules.

27. No suspension of work shall take place pending the decision of the board or the president. Neither shall employers or operatives refuse to submit any case of dispute to the board (in accordance with the rules, instructions, and resolutions of the board) upon which either party may be desirous of the board's ruling.

Instructions

The board earnestly invites the attention of all who belong to it, to the following instructions:

1. If any subscriber to the board desires to have its assistance in redressing any grievance, he must explain the matter to the operatives' representative of the works at which he is employed. Before doing so he must, however, have done his best to get his grievance righted by seeing his foreman, or the manager, himself.

2. The operatives' representative must question the complainant about the matter, and discourage complaints which do not appear to be well founded. Before taking action, he must ascertain that the previous instruction has been complied with.

3. If there seem to be good grounds for complaint, the complainant and the operatives' representative must take a suitable opportunity of laying the matter before the foreman or works manager, or head of the concern (according to what may be the custom of the particular works). Except in case of emergency, these complaints shall be made only upon one day in each week, the said day and time being fixed by the manager of the works.

4. The complaint should be stated in a way that implies an expectation that it will be fairly and fully considered, and that what is right will be done. In most cases this will lead to a settlement without the matter having to go further.

5. If a settlement under instructions 1, 2, 3, 4, can not be concluded the works representatives and the area secretary and the disputants shall meet the management to discuss the question in dispute, and endeavor to arrive at a decision. Failing this, the matter shall be brought before the standing committee, as per rule 16.

6. If, however, an agreement can not be come to, a statement of the points in difference shall be drawn out signed by the employers' representative and the operatives' representative and forwarded to the secretaries of the board with a request that the standing committee will consider the matter. An official form, on which complaints may be stated, can be obtained from the secretaries.

6. (a) When either the employers' or operatives' representative has prepared a statement on points in difference, as above provided, he shall note on the official forms the date upon which they are handed to the other representative for completion, and it shall be the duty of the latter to complete the statement in order that the forms may be dispatched to the board secretaries within two weeks from the date of the same being received for completion. Failing the other representative completing the statement as herein required, the points in difference shall be referred to the standing committee and be dealt with by the committee notwithstanding the said failure to complete the official forms.

7. It will be the duty of the standing committee to meet for this purpose as soon after the expiration of seven days from receipt of the notice as can be arranged, but not later than the first Thursday in each month.

8. It is not, however, always possible to avoid some delay, and the complainant must not suppose that he will necessarily lose anything by having to wait, as any recommendation of the standing committee, or any decision of the board, may be made to date back to the time of the complaint being sent in.

9. Above all, the board would impress upon its subscribers that there must be no strike or suspension of work. The main object of the board is to prevent anything of this sort, and if any strike or suspension of work take place the board will refuse to inquire into the matter in dispute till work is resumed, and the fact of its having been interrupted will be taken into account in considering the question.

10. It is recommended that any changes in the modes of working requiring alterations in the hours of labor or a revision of the scale of payments shall be made a matter of notice as far as possible of arrangement beforehand so as to avoid needless subsequent disputes as to what ought to be paid.

11. Having in view the altered conditions of rolling steel, the employers and operatives may negotiate basis rates of wages to be paid for rolling, heating, and finishing steel of all kinds. And where new conditions of work arise, and improve-

ments are effected, the employers and operatives may arrange reasonable revision of rates, and failing agreement the question shall be submitted to the standing committee, whose decision shall be binding.

CONSTITUTION, RULES, AND PROCEDURE OF THE WELSH TIN PLATE AND SHEET JOINT INDUSTRIAL COUNCIL¹

1. *Title and constitution.*—(a) The title of the council shall be the Welsh Tin Plate and Sheet Trades Joint Industrial Council.

(b) The council shall consist of 32 representatives of the Welsh Tin Plate and Sheet Manufacturers' Association, and 32 representatives appointed by the following workmen's organizations: Iron and Steel Trades Confederation; Transport and General Workers' Union; National Union of General Workers; Amalgamated Engineering Union; and Welsh Artisans' Association.

(c) The proportion of representation of each of the workmen's organizations shall be decided by them in the first instance, and reported to the council, and no change shall thereafter be made without the approval of the council.

(d) There shall be a joint standing committee elected as hereinafter provided.

(e) Each side of the council shall appoint a chairman, vice chairman, and a secretary; the appointments to be for a period of 12 months, and to be reported to the annual meeting of the council.

2. *Objects.*—The objects of the council shall be twofold, thus:

(1) To act as a medium for settling disputes arising between employers and employed in the works connected with the council; to use its influence to prevent disputes; and to endeavor to adjust those that may arise.

(2) To consider and advise on other matters affecting the interests of employers and employed in the Welsh tin-plate and sheet trades including inter alia:

(a) The position of the trade commercially. For this purpose statistics to be provided of: Production, exports, foreign production and competition, raw material.

(b) The position of the trade technically. Discussion of inventions and suggestions from either side for improving technical efficiency.

(c) Welfare and status of the employees and legislation affecting the trade.

(d) Technical and other education and the relation of the trade to the educational authorities.

3. *Meetings.*—The statutory annual meeting of the council shall take place in May of each year. Other meetings shall be held if the same be deemed necessary by the joint standing committee.

The function of the council shall be to consider and decide on questions referred to it by the joint standing committee with particular reference to the specific objects of the council as defined in clause 2 of these rules.

At the annual meeting the secretaries shall jointly report on the work of the joint standing committee, and it shall be competent for either side to raise for discussion matters of mutual interest.

An agenda of the proceedings shall be sent out to members of the council not less than two full weeks before the date of the meeting. Questions other than those specifically submitted by the joint standing committee must be of a general character, and notification of same must be in the hands of the secretaries not less than three weeks before the date of the meeting.

4. *Machinery for dealing with disputes—Joint standing committee.*—There shall be appointed from the representatives on the council, a joint standing committee of 18 members, 9 of whom shall be appointed by the employers, and 9 by the workmen's organizations. The appointments shall be reported to the meeting of the council. The organizations representing the workmen's side of the joint industrial council shall have representation on the joint standing committee in the following proportions: The Iron and Steel Trades Confederation, 3 representatives; Transport and General Workers' Union, 3 representatives; Amalgamated Engineering Union, 1 representative; Welsh Artisans' Union, 1 representative; and National Union of General Workers, 1 representative.

In the appointment of the representatives on the joint standing committee, the organizations shall insure that direct representation on the joint standing committee is provided for the different departments of the trades; viz., (a) tin-plate-mill men, (b) Welsh sheet-mill men, (c) finishing department, (d) mechanical, (e) subsidiary.

¹ Adopted by the council at a meeting held Aug. 13, 1924.

Membership on the joint standing committee shall be for one year, but retiring members shall be eligible for reappointment. In the event of the death or resignation of a member of the council the vacancy shall be filled in accordance with the foregoing provisions.

5. *Officers of organizations.*—The permanent officers of the employers' and workmen's organizations shall be ex-officio members of the joint industrial council and the joint standing committee, but without voting power.

6. *Regulations for procedure.*—It shall be an accepted principle of the council that every effort shall be made to adjust purely local questions or claims at the works where they arise, and that neither side shall attempt to evade their responsibility in this matter by placing it upon the joint standing committee. Unless this principle is observed to the fullest extent practicable, the machinery of negotiation must become clogged and friction arise from delay in adjusting differences with disadvantage to all concerned. The procedure shall be as follows:

(a) On a difference arising at any works the workmen concerned shall endeavor through their works representative, to settle the matter with the management. Failing settlement, the matter shall be dealt with between the permanent official of the workmen's organization concerned and the works management, with the official of the employers' organization if desired, and only if the foregoing procedure fails to effect a settlement, shall the matter be referred to the joint standing committee.

(b) On a matter being referred to the joint standing committee, whether it be a question referred from a particular works or of a more general character, the matter shall be submitted in writing to the two secretaries of the council, and the committee shall meet as soon as practicable, but within a month from the date of the matter being so submitted.

It shall be competent for either party to call such evidence as may be necessary to enable the joint standing committee to come to a decision on the merits of the case.

If the matter submitted is one affecting more than an individual works, due regard shall be paid to the desirability of applying the principle of uniform arrangements so far as this is practicable.

(c) If the joint standing committee refer any matter to a subcommittee, the committee shall fix the date on which the subcommittee shall meet, and the meeting may be held at the works concerned, or at such other place as may be deemed most suitable.

(d) The subcommittee shall hear the evidence on the case after which the parties directly concerned (management and workmen), shall withdraw, and the subcommittee thereafter endeavor to come to an amicable decision on the merits of the case.

(e) At the inquiry it shall not be competent for any member of a subcommittee (except with the approval of the subcommittee as a whole) to enter into private consultation with either of the parties directly concerned in the matter under consideration. All evidence given in regard to such matter must be stated before the full subcommittee.

(f) The joint standing committee and/or a subcommittee shall fix the date upon which their decisions become operative, and may make such decisions retrospective to the date on which the matter was reported to the joint standing committee as provided in paragraph (b) of these "Regulations for Procedure," and where the joint standing committee consider there has been unreasonable delay in dealing with the matter they may make their decisions retrospective to any other date not earlier than that on which the matter was first discussed between the permanent official of the workmen's organization concerned and the works management.

(g) Every decision of a subcommittee shall be duly reported in writing to the joint standing committee and recorded in the minutes of proceedings of the joint standing committee.

(h) Copies of the minutes of proceedings of the joint standing committee shall be circulated to all the representatives of the council.

(i) Any matter that can not be settled by means of the machinery of negotiation and procedure herein provided shall at the wish of either party be referred to arbitration, the form and constitution of the arbitration court to be decided by the joint standing committee.

7. *Stoppage of work during negotiations.*—It shall be an accepted principle of the council that no notices shall be presented by either side for the purpose of

enforcing claims, and that there shall be no stoppage of work in the form of strike or lockout during the process of negotiations or arbitration as herein provided.

In order, however, to avoid any unnecessary delay in dealing with matters coming within the purview of the council, all parties shall cooperate to the fullest possible extent to facilitate procedure and to effect a prompt and amicable settlement of any difference.

8. *Decisions.*—Decisions arrived at by the council or its joint standing committee, by a joint subcommittee, or by an arbitration court, shall be final and binding on all parties concerned.

SLIDING SCALE AGREEMENTS IN SOUTH WALES IRON AND STEEL INDUSTRY

Meeting of March 19, 1921

Memorandum of arrangement made at a meeting of a joint committee of the South Wales Siemens Steel Association and the Iron and Steel Trades Confederation:

1. The meeting was held on a request from the confederation that in view of the decision to apply the sliding-scale agreement consideration should be given to the position of the lower-paid workmen.

2. The workmen's representatives submitted a proposal providing that in respect of workmen with a basis earnings of 40s. or less for a normal week, such workmen should be paid 10 per cent in addition to the percentage payable under the sliding-scale agreement; this to continue in operation until the end of December, 1921.

3. That in consideration of the payment of 10 per cent extra as before stated workmen entitled to an advance under the scale agreement (which on the average ascertained price for the three months ending December, 1920, would give 156¼ per cent) should be limited to 5 per cent advance.

4. After final discussion on the matter it was agreed:

(a) That on and from the date of the sliding-scale agreement being given effect to, any workman 18 years of age and over to whom the sliding-scale agreement applies, whose basis earnings calculated for a full normal week of six-day shifts or five afternoon or night shifts, as the case may be, amounts to 30s. or under, shall be paid 10 per cent in addition to the sliding-scale percentage:

Provided, That where any workman whose earnings are above 30s. for the full normal week as above stated might in consequence of the foregoing arrangement receive less total earnings for the full normal week than the workman with the 30s. basis earnings, such workman shall be paid a proportion of the 10 per cent so that his total earnings calculated for the full normal week shall not be less than the 30s. man.

(b) This additional payment to remain in force until the end of December, 1921.

Secretary.

Agreement of March 24, 1920

Memorandum of agreement entered into March 24, 1920, between employers represented by the South Wales Siemens Steel Association (hereinafter called "the employers") of the one part, and the Iron and Steel Trades Confederation (hereinafter called "the workmen's organization") of the other part, acting for and on behalf of its members employed in steel works attached to the South Wales Siemens Steel Association:

1. This agreement is for the purpose of providing machinery for the periodical general regulation of wages of the workmen concerned and, subject to the agreement referred to in clause 10 hereof, substitutes the existing war advances.

2. The wages of the workmen concerned shall be governed by a sliding scale as hereinafter provided, and shall be regulated by the average net selling price per ton realized at makers' works of steel tin bars of all weights as ascertained from makers' books (excepting bars used by makers in their own works) in the periods provided by this agreement by a firm of public accountants, the appointment of whom shall be by mutual agreement.

3. The basis of the scale shall be the average net selling price of £5 per ton; and for every advance or reduction of 2s. 6d. per ton above the average net selling price of £5 per ton wages shall be advanced or reduced as the case may be at the rate of 1.25 per cent (one and a quarter per cent).

4. Defective steel tin bars are not to be included in the ascertainment.
5. The operation of the sliding scale governing the wages of the workmen concerned is set forth in the appendix to this agreement.
6. The accountants' ascertainments provided for in the agreement shall be as follows:

Average net selling price for the months of—	Ascertainment and certified by the accountants during the months of—	Shall govern wages to be paid during the months of—
January, February, and March.....	April.....	May, June, and July.
April, May, and June.....	July.....	August, September, and October.
July, August, and September.....	October.....	November, December, and January.
October, November, and December.....	January.....	February, March, and April.

Any alteration in wages under the sliding scale shall become operative at 6 a. m. on the first Sunday in each month of May, August, November, and February, respectively.

7. The accountants shall forward their certificate for each of the periods of ascertainment as herein provided to the secretary of the employers and to the secretary of the workmen's organization and the advance or reduction of wages, as the case may be, due under the certificate of ascertainment, shall be confirmed as between the employers' and the workmen's secretaries before the members of the employers' and of the workmen's organizations are notified of the ascertainment and its effect upon wages.

8. The accountants' fees shall be borne in equal parts by the employers' and the workmen's organizations.

9. Subject to the provisions of clause 10 herein, this agreement shall come into force on April 1, 1920, and shall remain in force for a period of 12 months certain, and either party hereto desiring thereafter to alter or terminate this agreement must give 3 months' notice, such notice to be given as from the first day of April, 1921, or as from the first day of any succeeding May, August, November, or February.

10. The operation of this agreement shall, to the extent that it is thereby affected, be subject to the provisions of the memorandum of agreement made between the South Wales Siemens Steel Association and the Iron and Steel Trades Confederation, at a conference held at the Royal Metal Exchange, Swansea, on Tuesday, March 16, 1920.

Table showing the operation of the sliding scale regulating the wages of the workmen concerned in the foregoing agreement [is given below]. The wages shall be advanced or reduced at the end of each period of three months by additions or reductions in accordance with the following scale:

When average net selling price is—

£	s.	d.	£	s.	d.	Wages to be at following percentage on scale
5	0	0	5	0	0	Base.
5	2	6	5	5	0	1. 25
5	5	0	5	7	6	2. 50
6	0	0	6	2	6	10. 00
7	0	0	7	2	6	20. 00

EDITOR'S NOTE.—Only enough of the table is reproduced to illustrate it. It starts with £5. When the average net selling price is £5 or under, the base rate is paid. When the selling price is £5 2s. 6d. and under £5 5s. 0d., the rate to be paid is the base rate increased by 1.25 per cent. The scale increases as the selling price advances. Thus, when the selling price is £7 and under £7 2s. 6d., the wage rate is the base rate increased by 20 per cent. See report for tin-bar mills, page 142.

11. Any dispute arising out of this agreement or as to the correct interpretation of any part hereof that can not be settled between the parties hereto shall be submitted to arbitration.

Agreement of March 16, 1920

Memorandum of agreement made between the South Wales Siemens Steel Association, and the Iron and Steel Trades Confederation at a conference held at the Royal Exchange, Swansea, on Tuesday, March 16, 1920:

1. *Special bonus.*—Workpeople represented by the Iron and Steel Trades Confederation and employed in works represented by the South Wales Siemens

Steel Association shall be given the special bonus of 40 per cent recently agreed to in the tin-plate trade to date from January 18, 1920.

2. *Adoption of sliding-scale system of regulating wages.*—The sliding-scale system of regulating wages shall be adopted and a committee appointed to draw up an arrangement on the following basis:

(a) The basis of the scale to be an ascertained average net selling price at makers' works of steel tin bars of £5 per ton.

(b) The fluctuations of the scale to be advances or reductions in wages of $1\frac{1}{4}$ per cent for each advance or reduction of 2s. 6d. per ton on the average ascertained net selling price over and above the basis of £5 per ton.

3. *Adaptation of existing war advances to scale arrangement.*—The present war advances (including the above-mentioned 40 per cent) to apply up to the point when the ascertained average net selling price of steel tin bars reaches £23 per ton, at which point the sliding scale shall become operative and the advance of 180 per cent which at that selling price will accrue on the scale, be uniformly applied to all the workmen governed by the scale. Thereafter general advances or reductions shall be according to the ascertained average net selling price in conformity with the scale arrangement. Provided that if, in the interim, an increase in the special bonus, not exceeding 10 per cent is given to the tin-plate trade, it shall also be applied to the steel trade, in which event such increase shall merge in advances accruing under the sliding scale in respect of ascertained average net selling prices above £23 per ton.

Wages of New Zealand Seamen

A REPORT from the United States consul at Wellington, New Zealand, gives particulars as to the new wage scale for New Zealand seamen which became effective July 1, 1926. The increase is established by an award given by the Labor Disputes Investigation Tribunal, acting in a disagreement between the seamen's union and the shipowners. The seamen had asked for an increase of about 16 per cent on the existing scale, which had been fixed in 1924, while the owners had offered to continue the scale substantially unchanged. In making the award, the chairman of the tribunal pointed out that since 1924 the basic wage for unskilled, semiskilled, and skilled labor in other industries had been increased, while in the shipping industry no advance had been made. It seemed desirable, therefore, to bring the seamen's wages into line with the amounts payable for corresponding work in other industries. The wages fixed by the new award involve an increase of 17s. 4d.¹ a month over the old scale, which is an advance of 1d. per hour. The old and new scales are as follows:

	New scale			Old scale		
	£	s.	d.	£	s.	d.
Boatswain, leading able seaman, lamp trimmer and able seaman (combined).....	16	4	0	15	6	8
Quartermaster, lamp trimmer, able seaman, trimmer, wiper.....	15	4	0	14	6	8
Ordinary seaman, 18 years and over.....	10	9	0	9	11	8
Ordinary seaman, under 18 years.....	9	4	0	8	6	8
Donkey man.....	18	4	0	17	6	8
Second donkey man, fireman-greaser (on vessels carry- ing one engineer only), fireman, oilburner, store- keeper, greaser, storekeeper and greaser combined....	17	4	0	16	6	8
Boy, 17 years of age or over.....	5	0	0	0	0	0
Attendant.....	10	17	4	0	0	0

¹ At par, pound = \$4.8665, shilling = 24.3 cents, penny = 2.03 cents; exchange value approximately par.

Wages and Prices in Vizcaya Province, Spain

THE official bulletin of the Department of Labor, Commerce, and Industry of Spain² contains the following tables showing the number of skilled and unskilled workers employed in the Province of Vizcaya, the average wage per hour, and the index numbers thereof, by industry, for the years 1914, 1920, and 1925.

NUMBER OF WORKERS, AVERAGE HOURLY WAGES, AND INDEX NUMBERS OF WAGES, BY INDUSTRY, 1914, 1920, 1925

[Peseta at par=19.3 cents; average exchange rate in 1925 was 14.3 cents]

Industry	1914			1920			1925		
	Num- ber of work- ers	Aver- age hourly wage	Index num- bers of wages	Num- ber of work- ers	Aver- age hourly wage	Index num- bers of wages	Num- ber of work- ers	Aver- age hourly wage	Index num- bers of wages
<i>Skilled male workers</i>									
		<i>Pesetas</i>			<i>Pesetas</i>			<i>Pesetas</i>	
Mining, quarrying.....	8,376	0.42	100	7,923	0.99	236	6,201	1.02	243
Metallurgical.....	4,366	.49	100	6,868	1.23	251	7,703	1.47	300
Iron and other metals.....	2,725	.47	100	6,267	1.15	244	6,264	1.30	276
Chemical.....	288	.44	100	392	.98	223	413	1.15	261
Construction.....	1,865	.41	100	1,939	1.21	295	2,105	1.39	339
Electrical.....	228	.42	100	237	.91	217	374	1.11	287
Food.....	4,327	.37	100	4,132	.87	235	4,396	1.27	343
Paper.....	456	.44	100	785	1.08	245	562	1.19	270
Clothing.....	205	.50	100	267	1.25	250	274	1.28	256
Hides and leather.....	327	.40	100	385	.60	150	452	.81	202
Lumber.....	1,006	.40	100	1,121	1.13	282	1,095	1.37	342
Transportation.....	2,075	.66	100	2,501	1.70	257	2,734	1.47	222
Furniture.....	270	.40	100	371	1.18	295	477	1.33	332
Decoration.....	198	.37	100	204	1.13	305	100	1.37	370
Glass and glassware, etc.....	198	.50	100	225	1.37	274	257	1.56	312
<i>Unskilled male workers</i>									
Metallurgical.....	1,543	.35	100	2,281	1.04	297	3,491	1.22	348
Iron and other metals.....	1,470	.36	100	3,224	.65	180	3,328	.92	255
Chemical.....	81	.37	100	141	.85	235	143	.98	265
Construction.....	493	.30	100	545	.90	300	602	1.10	366
Electrical.....	62	.29	100	60	.62	214	92	.75	258
Food.....	125	.25	100	125	.50	200	523	.74	296
Paper.....	158	.27	100	232	.57	211	217	.62	230
Hides and leather.....	74	.30	100	80	.40	133	85	.60	200
Lumber.....	325	.30	100	340	.60	200	325	.72	240
Transportation.....	276	.42	100	691	.83	197	402	.92	219
<i>Female workers</i>									
Food products.....	370	.15	100	100	.25	167	125	.25	167
Paper.....	271	.20	100	244	.54	270	260	.60	300
Clothing.....	798	.20	100	895	.45	225	925	.56	280

As regards the average length of the working-day, the report states that in 1914, 70 per cent of the workers were employed 60 hours a week, while in 1920 and 1925, 90 per cent worked 48 hours per week.

² Spain. Ministerio de Trabajo, Comercio e Industria. Boletín Oficial, Madrid, April, 1926, pp. 128, 129.

Data showing the average retail prices of certain staple articles in this Province are given in the following statement:

		Price (pesetas ²)
Bread.....	kilogram ⁴	0. 65
Beef.....	do.....	2. 70
Lamb.....	do.....	3. 50
Pork, fresh.....	do.....	5. 20
Pork, salt.....	do.....	3. 00
Sardines, fresh.....	do.....	. 40
Fish, salt.....	do.....	1. 60
Beans.....	do.....	1. 70
Rice.....	do.....	. 80
Potatoes.....	do.....	. 25
Coffee.....	do.....	9. 50
Sugar.....	do.....	1. 60
Eggs.....	dozen.....	2. 60
Milk.....	liter ⁴	. 50
Coal.....	25 pounds.....	2. 75

² Peseta at par = 19.3 cents; average exchange value for 1925 = 14.3 cents.

⁴ Kilogram = 2.2 pounds; liter = 1.06 quarts.

TREND OF EMPLOYMENT

Employment in Selected Industries in August, 1926

EMPLOYMENT in manufacturing industries increased 1 per cent in August as compared with July, and pay-roll totals increased 3.7 per cent. The return to regular conditions, after the inventory-taking and repair season of July, accounts for a part of these increases, although in many industries a well-defined upward trend in employment was noticeable despite the continuance of the vacation season.

Employment in August also was 0.9 per cent greater than in the same month of 1925, and pay-roll totals were 3.5 per cent greater.

The bureau's weighted index of employment for August is 90.7 as compared with 89.8 for July, 1926, and 89.9 for August, 1925; the index for pay-roll totals for August is 94.6 as compared with 91.2 for July, 1926, and 91.4 for August, 1925.

This report covers 10,180 establishments, having in August 2,996,995 employees whose combined earnings in one week were \$79,832,996.

Comparison of Employment and Pay-Roll Totals in July and August, 1926

THIRTY-NINE of the 54 separate industries made employment gains in August, rubber boots and shoes leading with a gain of over 25 per cent, after a vacation period in July. Fertilizers showed a seasonal gain of over 11 per cent; pottery showed a gain of 10 per cent, following its usual slack period in July; and women's clothing showed a seasonal gain of 7.8 per cent, despite effects of labor troubles in New York. The stove, flour, piano, boot and shoe, and confectionery industries each added 5 per cent or more to their employees. The automobile, dyeing and finishing textiles, and hosiery industries each gained 2.6 per cent in employment, while the iron and steel industry gained 1.1 per cent and woolen and worsted goods gained 0.2 per cent.

The machine-tool industry as usual in August reported considerably fewer employees at work, owing to customary vacations, and the other noticeable—although much smaller—decreases were in the shirt and collar, cigar, baking, and ice cream industries.

Employees earnings were greatly increased in August in 43 of the 54 industries, 21 of the industry increases ranging from 5 to 18.9 per cent. The rubber boot and shoe, women's clothing, and pottery industries each reported a gain of over 16 per cent; automobiles reported a gain of 11.7 per cent, boots and shoes of 8.9 per cent, cotton of 3.5 per cent, iron and steel and foundries of 2 per cent each, and woolen goods of 0.4 per cent.

Eleven of the 12 groups of industries showed increased employment in August, and with one exception—the food group in which there was no change—in employees' earnings as well. The greatest im-

provement in each item was made in the leather group. The vehicle, textile, and stone, clay, and glass groups each combined a comparatively small gain in employment with a large increase in pay-roll totals. The tobacco group alone reported fewer employees in August, with a consequent drop in pay-roll totals.

Employment conditions in August were better in 8 of the 9 geographic divisions, and employees' earnings increased in every division. Increases in employment ranged from 0.2 per cent in the Middle Atlantic States to 1.8 per cent in the East North Central States; the Mountain States dropped 0.8 per cent of their employees. Pay-roll totals were 7.4 per cent greater in the East North Central division and 1 per cent greater in the East South Central division.

For convenient reference the latest figures available relating to all employees, excluding executives and officials, on Class I railroads, drawn from Interstate Commerce Commission reports, are given at the foot of Table 1 and Table 3.

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN JULY AND AUGUST, 1926

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		July, 1926	August, 1926		July, 1926	August, 1926	
Food and kindred products	1,493	209,854	210,797	(1)	\$5,370,061	\$5,371,812	(1)
Slaughtering and meat packing.....	194	84,941	85,740	+0.9	2,191,181	2,172,325	-0.9
Confectionery.....	256	28,384	29,800	+5.0	515,486	546,831	+6.1
Ice cream.....	204	11,095	10,889	-1.9	372,737	366,462	-1.7
Flour.....	334	15,046	16,028	+6.5	396,230	425,764	+7.5
Baking.....	490	58,742	57,469	-2.2	1,576,984	1,533,090	-2.8
Sugar refining, cane.....	15	10,846	10,871	+0.2	317,443	327,340	+3.1
Textiles and their products	1,831	542,810	546,261	(1)	10,047,911	10,525,874	(1)
Cotton goods.....	479	205,691	205,132	-0.3	3,008,839	3,114,734	+3.5
Hosiery and knit goods.....	247	76,366	78,381	+2.6	1,373,120	1,460,595	+6.4
Silk goods.....	202	54,528	55,541	+1.9	1,118,286	1,186,889	+6.1
Woolen and worsted goods.....	193	58,118	58,251	+0.2	1,286,427	1,291,008	+0.4
Carpets and rugs.....	29	19,118	19,851	+3.8	489,551	527,418	+7.7
Dyeing and finishing textiles.....	87	27,352	28,075	+2.6	625,357	654,181	+4.6
Clothing, men's.....	262	54,399	56,411	+3.7	1,312,370	1,406,877	+7.2
Shirts and collars.....	77	19,628	18,747	-4.5	301,480	289,941	-3.8
Clothing, women's.....	176	14,698	15,839	+7.8	320,451	374,141	+16.8
Millinery and lace goods.....	69	9,923	10,033	+1.1	212,030	220,090	+3.8
Iron and steel and their prod- ucts	1,826	688,654	690,425	(1)	19,646,338	20,020,246	(1)
Iron and steel.....	215	280,527	283,684	+1.1	8,178,011	8,345,633	+2.0
Cast-iron pipe.....	48	16,170	15,885	-1.8	388,273	367,049	-5.5
Structural ironwork.....	158	25,589	25,537	-0.2	713,618	736,476	+3.2
Foundry and machine-shop products.....	982	246,706	246,091	-0.2	7,096,690	7,224,797	+1.8
Hardware.....	66	34,261	34,543	+0.8	823,289	876,635	+6.5
Machine tools.....	159	31,413	28,662	-8.8	942,538	877,913	-6.9
Steam fittings and steam and hot-water heating apparatus.....	111	40,654	41,585	+2.3	1,162,207	1,204,784	+3.7
Stoves.....	87	13,334	14,438	+8.3	341,712	386,959	+13.2
Lumber and its products	1,069	215,234	217,750	(1)	4,561,554	4,785,446	(1)
Lumber, sawmills.....	452	128,921	129,629	+0.5	2,549,882	2,624,264	+2.9
Lumber, millwork.....	239	30,862	30,906	+0.1	747,966	779,601	+4.2
Furniture.....	378	55,471	57,215	+3.1	1,263,706	1,381,581	+9.3
Leather and its products	342	116,151	121,401	(1)	2,717,734	2,933,657	(1)
Leather.....	135	27,386	28,114	+2.7	675,548	710,480	+5.2
Boots and shoes.....	207	88,765	93,287	+5.1	2,042,186	2,223,177	+8.9
Paper and printing	888	163,386	168,812	(1)	5,355,586	5,391,265	(1)
Paper and pulp.....	211	55,682	55,872	+0.3	1,441,650	1,495,408	+3.7
Paper boxes.....	177	19,111	19,329	+1.1	416,813	419,770	+0.7
Printing, book and job.....	289	46,102	46,005	-0.2	1,590,494	1,585,725	-0.3
Printing, newspaper.....	211	47,491	47,606	+0.2	1,906,629	1,890,362	-0.9

TABLE 1.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS IN IDENTICAL ESTABLISHMENTS DURING ONE WEEK EACH IN JULY AND AUGUST, 1926—Contd.

Industry	Estab- lish- ments	Number on pay roll		Per cent of change	Amount of pay roll		Per cent of change
		July, 1926	August, 1926		July, 1926	August, 1926	
Chemicals and allied products.	284	88,818	89,713	(¹)	2,592,178	2,639,219	(¹)
Chemicals.....	116	28,896	29,098	+0.7	789,812	785,318	-0.6
Fertilizers.....	113	7,113	7,904	+11.1	149,677	160,118	+7.0
Petroleum refining.....	55	52,809	52,711	-0.2	1,652,689	1,713,783	+3.7
Stone, clay, and glass products.	691	112,913	114,950	(¹)	2,907,928	3,092,490	(¹)
Cement.....	95	27,017	27,189	+0.6	781,182	839,795	+7.5
Brick, tile, and terra cotta.....	415	36,557	36,726	+0.5	930,345	964,437	+3.7
Pottery.....	58	11,756	12,927	+10.0	289,178	335,718	+16.1
Glass.....	123	37,583	38,108	+1.4	907,223	952,546	+5.0
Metal products, other than iron and steel.	213	52,650	52,131	(¹)	1,343,110	1,379,325	(¹)
Stamped and enameled ware.....	66	19,216	19,156	-0.3	438,412	459,226	+4.7
Brass, bronze, and copper products.....	147	32,844	32,975	+0.4	904,698	920,099	+1.7
Tobacco products.	201	43,764	43,665	(¹)	774,251	765,387	(¹)
Chewing and smoking tobacco and snuff.....	30	8,852	9,031	+2.0	140,356	135,122	-3.7
Cigars and cigarettes.....	171	34,912	33,634	-3.7	633,895	630,265	-0.6
Vehicles for land transportation.	946	482,329	489,165	(¹)	14,300,173	15,604,224	(¹)
Automobiles.....	205	317,555	325,928	+2.6	9,628,751	10,756,266	+11.7
Carriages and wagons.....	66	2,245	2,302	+2.5	47,448	52,013	+9.6
Car building and repairing, electric-railroad.....	225	18,966	18,873	-0.5	564,400	576,275	+2.1
Car building and repairing, steam-railroad.....	450	143,463	142,062	-1.0	4,050,484	4,210,670	+3.9
Miscellaneous industries.	406	246,368	253,925	(¹)	7,028,207	7,304,045	(¹)
Agricultural implements.....	94	25,897	26,415	+2.0	723,558	760,072	+5.0
Electrical machinery, apparatus, and supplies.....	161	115,880	117,296	+1.2	3,269,137	3,391,332	+3.7
Pianos and organs.....	40	7,802	8,207	+5.2	213,904	240,676	+12.5
Rubber boots and shoes.....	10	13,041	16,339	+25.3	311,273	369,961	+18.9
Automobile tires.....	63	55,432	56,724	+2.3	1,693,969	1,716,785	+1.3
Shipbuilding, steel.....	38	28,316	27,944	-1.3	816,276	825,219	+1.1
All industries	10,180	2,963,472	2,996,995	(¹)	76,645,031	79,832,996	(¹)

Recapitulation by Geographic Divisions

GEOGRAPHIC DIVISIONS							
New England.....	1,310	391,269	398,722	+1.9	\$9,296,358	\$9,657,038	+3.9
Middle Atlantic.....	2,444	830,219	831,503	+0.2	23,037,428	23,358,986	+1.4
East North Central.....	2,699	984,320	1,002,185	+1.8	27,940,909	30,010,780	+7.4
West North Central.....	988	157,556	160,060	+1.6	3,922,545	4,057,785	+3.4
South Atlantic.....	1,098	268,427	270,438	+0.7	4,928,689	4,995,341	+1.4
East South Central.....	465	108,509	109,511	+0.9	2,055,647	2,077,158	+1.0
West South Central.....	425	87,458	88,777	+1.5	1,803,035	1,890,118	+4.8
Mountain.....	175	27,449	27,237	-0.8	726,741	735,938	+1.3
Pacific.....	577	108,265	108,562	+0.3	2,933,670	3,049,852	+4.0
All divisions	10,180	2,963,472	2,996,995	(¹)	76,645,031	79,832,996	(¹)

Employment on Class I Railroads

June 15, 1926.....		1,816,818		² \$241,574,062	
July 15, 1926.....		1,840,371	+1.3	² 247,095,438	+2.3

¹ The per cent of change has not been computed for the reason that the figures in the preceding columns are unweighted and refer only to the establishments reporting; for the weighted per cent of change, wherein proper allowance is made for the relative importance of the several industries, so that the figures may represent all establishments of the country in the industries here represented, see Table 2.

² Amount of pay roll for 1 month.

TABLE 2.—PER CENT OF CHANGE, JULY TO AUGUST, 1926, IN THE 12 GROUPS OF INDUSTRIES AND IN THE TOTAL FOR ALL INDUSTRIES

[Computed from the index numbers of each group, which are obtained by weighting the index numbers of the several industries of the group by the number of employees or wages paid in the industries]

Group	Per cent of change, July to August, 1926		Group	Per cent of change, July to August, 1926	
	Number on pay roll	Amount of pay roll		Number on pay roll	Amount of pay roll
Food and kindred products...	+0.7	(¹)	Metal products, other than iron and steel.....	+0.2	+2.3
Textiles and their products...	+1.7	+5.9	Tobacco products.....	-3.0	-0.9
Iron and steel and their prod- ucts.....	+0.2	+2.0	Vehicles for land transporta- tion.....	+0.7	+7.2
Lumber and its products.....	+0.9	+4.4	Miscellaneous industries.....	+1.3	+2.6
Leather and its products.....	+4.4	+7.9			
Paper and printing.....	+0.2	+0.6			
Chemicals and allied products	+1.6	+2.1	All industries.....	+1.0	+3.7
Stone, clay, and glass products	+2.1	+6.3			

¹ No change.

Comparison of Employment and Pay-Roll Totals in August, 1925, and August, 1926

EMPLOYMENT in manufacturing industries in August, 1926, was 0.9 per cent greater than in August, 1925, and employees' earnings were 3.5 per cent greater, 32 industries showing greater employment and 33 industries greater pay-roll totals.

The most pronounced improvement in this 12-month interval occurred in iron and steel industries—machine tools, structural-iron work, foundry and machine-shop products, iron and steel, and stoves—and also in electrical machinery, apparatus, and supplies, and in steel-ship building.

The most pronounced losses shown by this yearly comparison were in textile industries—woolen and worsted goods, millinery and lace goods, women's clothing, silk goods, and shirts and collars—and in the cigar industry.

The West South Central and South Atlantic States showed the greatest increase in manufacturing activity in August, 1926, as compared with August, 1925. The East North Central and Pacific geographic divisions also showed considerable advance. The Mountain States showed the greatest decrease in employment and employees' earnings, while the New England division also made an unsatisfactory showing, largely owing to conditions in the textile industries.

TABLE 3.—COMPARISON OF EMPLOYMENT AND PAY-ROLL TOTALS—AUGUST, 1926, WITH AUGUST, 1925

[The per cents of change for each of the 12 groups of industries, and for the total of all industries, are weighted in the same manner as are the per cents of change in Table 2]

Industry	Per cent of change, August, 1926, compared with August, 1925		Industry	Per cent of change, August, 1926, compared with August, 1925	
	Num- ber on pay roll	Amount of pay roll		Num- ber on pay roll	Amount of pay roll
Food and kindred products.	-0.1	+0.8	Paper and printing—Contd.		
Slaughtering and meat pack- ing.....	-2.5	-2.4	Printing, book and job.....	+3.4	+10.1
Confectionery.....	-1.0	+1.5	Printing, newspaper.....	+4.3	+7.9
Ice cream.....	+0.4	+3.4	Chemicals and allied prod- ucts.	+3.6	+5.3
Flour.....	+3.1	+4.8	Chemicals.....	+4.0	+8.6
Baking.....	+2.5	+3.8	Fertilizers.....	+1.0	+4.5
Sugar refining, cane.....	-7.0	-7.8	Petroleum refining.....	+4.3	+2.2
Textiles and their products.	-6.0	-7.5	Stone, clay, and glass prod- ucts.	+4.1	+4.8
Cotton goods.....	-2.2	-3.6	Cement.....	-4.4	-1.3
Hosiery and knit goods.....	-2.8	+0.5	Brick, tile, and terra cotta.....	+5.1	+4.8
Silk goods.....	-8.9	-9.1	Pottery.....	+3.5	+3.4
Woolen and worsted goods.....	-11.3	-7.9	Glass.....	+6.4	+8.1
Carpets and rugs.....	(1)	+1.2	Metal products, other than iron and steel.	-1.0	-4.4
Dyeing and finishing textiles.....	-1.1	-0.9	Stamped and enameled ware.....	+0.3	-4.6
Clothing, men's.....	-4.8	-7.7	Brass, bronze, and copper products.....	-1.6	-4.2
Shirts and collars.....	-7.9	-9.7	Tobacco products.	-9.7	-8.2
Clothing, women's.....	-9.7	-17.3	Chewing and smoking tobacco and snuff.....	+4.0	-1.4
Millinery and lace goods.....	-21.5	-19.8	Cigars and cigarettes.....	-11.5	-9.1
Iron and steel and their products.	+7.4	+9.1	Vehicles for land transpor- tation.	+0.8	+5.3
Iron and steel.....	+5.0	+5.0	Automobiles.....	+0.7	+4.5
Structural ironwork.....	+10.5	+12.8	Carriages and wagons.....	+9.8	+16.5
Foundry and machine-shop products.....	+9.9	+13.7	Car building and repairing, electric-railroad.....	+2.2	+2.1
Hardware.....	-5.0	-0.2	Car building and repairing, steam-railroad.....	+0.4	+6.0
Machine tools.....	+14.8	+15.7	Miscellaneous industries.	+4.9	+6.9
Steam fittings and steam and hot-water heating apparatus.....	+0.5	+2.9	Agricultural implements.....	+4.1	+9.0
Stoves.....	+4.5	+2.6	Electrical machinery, appa- ratus, and supplies.....	+11.4	+13.7
Lumber and its products.	-0.6	+2.6	Pianos and organs.....	+19.3	+27.2
Lumber, sawmills.....	-0.6	+2.7	Rubber boots and shoes.....	+6.6	+6
Lumber, millwork.....	-3.9	-2.8	Automobile tires.....	-8.6	-7.6
Furniture.....	+1.6	+6.2	Shipbuilding steel.....	+6.2	+9.0
Leather and its products.	-0.5	-0.5	All industries.....	+0.9	+3.5
Leather.....	+3.1	+5.3			
Boots and shoes.....	-1.6	-2.7			
Paper and printing.	+3.2	+7.5			
Paper and pulp.....	+1.7	+5.2			
Paper boxes.....	+3.8	+4.0			

Recapitulation by Geographic Divisions

GEOGRAPHIC DIVISION			GEOGRAPHIC DIVISION—contd.		
New England.....	-2.7	-2.4	East South Central.....	-1.0	-0.9
Middle Atlantic.....	+0.9	+3.4	West South Central.....	+4.7	+8.0
East North Central.....	+2.3	+5.2	Mountain.....	-4.3	-2.6
West North Central.....	-0.6	+0.7	Pacific.....	+2.2	+5.1
South Atlantic.....	+3.9	+5.4	All divisions.....	+0.9	+3.5

Employment on Class I Railroads

Month and year	Number on pay roll	Per cent of change	Amount of pay roll	Per cent of change
July 15, 1925.....	1,779,222		\$238,414,620	
July 15, 1926.....	1,840,371	+3.4	247,095,438	+3.6

¹ No change.² Amount of pay roll for one month.

Per Capita Earnings

PER CAPITA earnings in August were 2.7 per cent greater than in July, 1926, and 2.6 per cent greater than in August, 1925.

Forty-three of the 54 separate industries show increased per capita earnings in August as compared with July. The greatest increase, 8.8 per cent, was in the automobile industry. This large increase was due to a resumption of full time after July inventory taking, and also to increased activities in many establishments. Employees in each of the following industries—women's clothing, carriages and wagons, pianos, cement, and furniture—gained 6 per cent or more in this item. Per capita earnings decreased from 3.7 per cent to 5.7 per cent in the cast-iron pipe, fertilizer, rubber boot and shoe, and chewing and smoking tobacco industries. There were also much smaller decreases in seven other industries.

Increased per capita earnings were shown in August, 1926, as compared with August, 1925, in 36 industries, and no change was shown in 3 industries. The most pronounced improvement in the year's interval was 6.7 per cent—in book and job printing. The most pronounced falling off in this comparison was 8.3 per cent—in the women's clothing industry.

TABLE 4.—COMPARISON OF PER CAPITA EARNINGS, AUGUST, 1926, WITH JULY, 1926, AND AUGUST, 1925

Industry	Per cent of change August, 1926, compared with—		Industry	Per cent of change August, 1926, compared with—	
	July, 1926	August, 1925		July, 1926	August, 1925
Automobiles.....	+8.8	+3.3	Electrical machinery, apparatus, and supplies.....	+2.5	+2.2
Clothing, women's.....	+8.3	-8.3	Leather.....	+2.4	+2.1
Carriages and wagons.....	+6.9	+6.2	Shipbuilding, steel.....	+2.4	+2.8
Pianos and organs.....	+6.9	+6.4	Lumber, sawmills.....	+2.3	+3.3
Cement.....	+6.8	+3.3	Foundry and machine-shop products.....	+2.1	+3.7
Furniture.....	+6.0	+4.2	Machine tools.....	+2.1	+1.0
Hardware.....	+5.6	+4.8	Dyeing and finishing textiles.....	+1.9	(¹)
Pottery.....	+5.6	-0.3	Brass, bronze, and copper products.....	+1.3	-2.8
Stamped and enameled ware.....	+5.1	-4.7	Steam fittings and steam and hot-water heating apparatus.....	+1.3	+2.9
Car building and repairing, steam-railroad.....	+4.9	+5.0	Confectionery.....	+1.0	+2.4
Stoves.....	+4.6	-1.5	Flour.....	+0.9	+1.5
Silk goods.....	+4.2	-0.3	Iron and steel.....	+0.9	+0.1
Lumber, millwork.....	+4.0	+0.9	Shirts and collars.....	+0.7	-1.9
Petroleum refining.....	+3.9	-1.8	Ice cream.....	+0.1	+3.1
Cotton goods.....	+3.8	-1.7	Woolen and worsted goods.....	+0.1	+3.8
Carpets and rugs.....	+3.7	+1.3	Printing, book and job.....	-0.1	+6.7
Boots and shoes.....	+3.6	-0.9	Paper boxes.....	-0.4	(¹)
Glass.....	+3.6	+1.5	Baking.....	-0.6	+1.3
Hosiery and knit goods.....	+3.6	+3.5	Automobile tires.....	-0.9	+0.9
Clothing, men's.....	+3.4	-2.8	Printing, newspaper.....	-1.1	+3.8
Paper and pulp.....	+3.4	+3.1	Chemicals.....	-1.2	+4.2
Structural ironwork.....	+3.4	+1.9	Slaughtering and meat packing.....	-1.8	+0.5
Brick, tile, and terra cotta.....	+3.2	(¹)	Cast-iron pipe.....	-3.7	(²)
Cigars and cigarettes.....	+3.2	+2.3	Fertilizers.....	-3.7	+3.6
Agricultural implements.....	+3.0	+4.9	Rubber boots and shoes.....	-5.2	-5.7
Sugar refining, cane.....	+2.9	-0.8	Chewing and smoking tobacco and snuff.....	-5.7	-5.3
Millinery and lace goods.....	+2.7	+2.3			
Car building and repairing, electric-railroad.....	+2.6	+0.1			

¹ No change.

² Data not yet available.

Wage Changes

FIFTY-FIVE establishments in 21 industries reported wage-rate increases for the month ending August 15. These increases, averaging 5.6 per cent, affected 4,397 employees, being 26 per cent of the total employees in the establishments concerned.

Wage-rate decreases were reported by six establishments in two industries. These decreases averaged 11.8 per cent and affected 526 employees, or 41 per cent of the employees in the establishments concerned.

TABLE 5.—WAGE ADJUSTMENT OCCURRING BETWEEN JULY 15 AND AUGUST 15, 1926.

Industry	Establishments		Per cent of increase or decrease in wage rates		Employees affected		
	Total number reporting	Number reporting increase or decrease in wage rates	Range	Average	Total number	Per cent of employees	
						In establishments reporting increase or decrease in wage rates	In all establishments reporting
			Increases				
Slaughtering and meat packing.....	194	1	6	6.0	92	6	(1)
Flour.....	334	3	5-7.5	7.4	253	93	2
Cotton goods.....	479	2	5-6.5	5.9	982	87	(1)
Woolen and worsted goods.....	193	2	5-6	5.3	27	9	(1)
Clothing, women's.....	176	2	5-6.7	5.7	15	17	(1)
Structural ironwork.....	158	7	3-10	7.4	91	6	(1)
Foundry and machine-shop products.....	982	6	4-10	5.0	461	47	(1)
Machine tools.....	159	4	3-9	4.5	54	14	(1)
Lumber, millwork.....	239	2	2-5	4.4	63	5	(1)
Furniture.....	378	4	6.5-11.2	9.9	46	7	(1)
Printing, book and job.....	289	4	5-13	5.4	114	25	(1)
Printing, newspaper.....	211	3	1-12	9.2	58	18	(1)
Chemicals.....	116	2	5-10	8.7	112	6	(1)
Brick, tile, and terra cotta.....	415	1	8	8.0	64	100	(1)
Brass, bronze, and copper products.....	147	1	9	9.0	7	18	(1)
Automobiles.....	205	2	5-7	6.7	232	16	(1)
Carriages and wagons.....	66	1	10	10.0	149	100	6
Car building and repairing, electric-railroad.....	225	2	6-14.3	6.1	753	51	4
Car building and repairing, steam-railroad.....	450	1	2	2.0	674	60	(1)
Electrical machinery, apparatus, and supplies.....	161	3	2.3-12	4.4	118	7	(1)
Pianos and organs.....	40	2	5-10	6.1	32	11	(1)
			Decreases				
Lumber, sawmills.....	452	4	4.3-20	11.2	460	39	(1)
Leather.....	135	2	10-25	15.9	66	77	(1)

¹ Less than one-half of 1 per cent.

Indexes of Employment and Pay-Roll Totals in Manufacturing Industries

INDEX numbers for August, 1926, and for July, 1926, and August, 1925, showing relatively the variation in number of persons employed and in pay-roll totals, in each of the 53¹ industries surveyed by the Bureau of Labor Statistics, together with general indexes for the combined 12 groups of industries, appear in Table 6, following.

¹ The total number is 54, but data for computing indexes for cast-iron pipe are not yet all available.

The general index of employment for August, 1926, is 90.7, this number being 1 per cent higher than the index for July, 1926, and 0.9 per cent higher than the index for August, 1925. The general index of pay-roll totals for August, 1926, is 94.6, this number being 3.7 per cent higher than the index for July, 1926, and 3.5 per cent higher than the index for August, 1925.

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, AUGUST, 1925, AND JULY AND AUGUST, 1926

[Monthly average, 1923=100]

Industry	Employment			Pay-roll totals		
	August, 1925	July, 1926	August, 1926	August, 1925	July, 1926	August, 1926
General index	89.9	89.8	90.7	91.4	91.3	94.6
Food and kindred products	89.9	89.2	89.8	92.8	93.5	93.5
Slaughtering and meat packing.....	83.3	80.4	81.2	84.7	83.5	82.7
Confectionery.....	80.3	75.7	79.5	85.1	81.5	86.4
Ice cream.....	112.5	115.1	113.0	119.8	126.1	123.9
Flour.....	89.7	86.9	92.5	92.1	89.8	96.5
Baking.....	98.3	103.0	100.8	100.9	107.7	104.7
Sugar refining, cane.....	100.4	93.2	93.4	104.0	93.0	95.9
Textiles and their products	86.8	80.2	81.6	87.2	76.2	80.7
Cotton goods.....	77.9	76.4	76.2	74.1	69.0	71.4
Hosiery and knit goods.....	96.3	91.2	93.6	103.9	98.1	104.4
Silk goods.....	105.7	94.5	96.3	113.7	97.4	103.4
Woolen and worsted goods.....	86.0	76.2	76.3	81.1	74.4	74.7
Carpets and rugs.....	90.4	87.1	90.4	85.7	80.5	86.7
Dyeing and finishing textiles.....	95.2	91.8	94.2	94.0	89.1	93.2
Clothing, men's.....	89.4	82.1	85.1	89.4	77.0	82.5
Shirts and collars.....	83.8	80.8	77.2	82.6	77.6	74.6
Clothing, women's.....	82.5	69.1	74.5	89.2	63.2	73.8
Millinery and lace goods.....	82.9	64.4	65.1	82.0	63.4	65.8
Iron and steel and their products	85.3	91.4	91.6	86.8	92.8	94.7
Iron and steel.....	92.1	95.7	96.7	93.1	95.9	97.8
Structural ironwork.....	94.9	105.1	104.9	99.9	109.2	112.7
Foundry and machine-shop products.....	79.8	87.9	87.7	79.4	88.7	90.3
Hardware.....	90.3	85.1	85.8	96.4	90.3	96.2
Machine tools.....	80.5	101.3	92.4	88.1	100.5	101.9
Steam fittings and steam and hot-water heating apparatus.....	90.5	94.8	97.0	96.9	98.2	101.8
Stoves.....	81.7	78.8	85.4	81.0	73.4	83.1
Lumber and its products	93.6	91.6	92.4	97.1	93.4	99.6
Lumber, sawmills.....	90.7	89.8	90.2	94.8	94.6	97.4
Lumber, millwork.....	102.6	98.5	98.6	109.7	102.3	106.6
Furniture.....	94.9	93.5	96.4	96.6	93.9	102.6
Leather and its products	92.9	88.5	92.4	94.3	86.8	93.7
Leather.....	88.0	88.3	90.7	88.6	88.7	93.3
Boots and shoes.....	94.5	88.5	93.0	96.4	86.1	93.8
Paper and printing	99.1	102.1	102.3	101.6	108.5	109.2
Paper and pulp.....	93.6	94.9	95.2	96.9	98.3	101.9
Paper boxes.....	96.4	99.0	100.1	102.3	105.7	106.4
Printing, book and job.....	99.0	102.6	102.4	101.1	111.7	111.3
Printing, newspaper.....	105.6	109.8	110.1	106.4	115.8	114.8
Chemicals and allied products	91.4	93.3	94.7	93.9	96.9	96.9
Chemicals.....	90.0	93.0	93.6	92.2	100.7	100.1
Fertilizers.....	81.8	74.3	82.6	86.1	84.1	90.0
Petroleum refining.....	97.4	101.8	101.6	97.8	96.4	100.0
Stone, clay, and glass products	98.8	100.8	102.9	105.4	104.0	110.5
Cement.....	101.7	96.7	97.2	108.8	99.9	107.4
Brick, tile, and terra cotta.....	104.8	109.5	110.1	111.4	112.6	116.8
Pottery.....	104.1	97.9	107.7	113.0	100.6	116.8
Glass.....	90.1	94.6	95.9	96.2	99.1	104.0
Metal products, other than iron and steel	95.5	94.3	94.5	98.3	91.9	94.0
Stamped and enameled ware.....	91.0	91.5	91.3	88.5	80.6	84.4
Brass, bronze, and copper products.....	97.6	95.6	96.0	101.9	96.0	97.6
Tobacco products	89.9	83.7	81.2	91.9	85.3	84.4
Chewing and smoking tobacco, and snuff.....	92.9	94.7	96.6	99.0	101.4	97.6
Cigars and cigarettes.....	89.5	82.3	79.2	91.1	83.3	82.8

TABLE 6.—INDEXES OF EMPLOYMENT AND PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES, AUGUST, 1925, AND JULY AND AUGUST, 1926—Continued
[Monthly average, 1923=100]

Industry	Employment			Pay-roll totals		
	August, 1925	July, 1926	August, 1926	August, 1925	July, 1926	August, 1926
Vehicles for land transportation.....	90.7	90.8	91.4	89.9	88.8	94.7
Automobiles.....	107.6	105.7	108.4	107.3	100.4	112.1
Carriages and wagons.....	95.0	101.8	104.3	90.1	95.8	105.0
Car building and repairing, electric-railroad.....	85.8	88.1	87.7	88.4	88.5	90.3
Car building and repairing, steam-railroad.....	80.0	81.1	80.3	78.8	80.3	83.5
Miscellaneous industries.....	90.3	93.4	94.6	93.1	97.0	99.5
Agricultural implements.....	90.3	92.1	94.0	98.6	102.4	107.5
Electrical machinery, apparatus, and supplies.....	87.5	96.4	97.5	89.3	97.9	101.5
Pianos and organs.....	77.4	87.8	92.3	79.3	89.7	100.9
Rubber boots and shoes.....	75.3	64.1	80.3	81.9	69.3	82.4
Automobile tires.....	121.5	108.6	111.1	122.9	111.9	113.3
Shipbuilding, steel.....	83.4	89.7	88.6	85.8	93.6	94.6

The following tables show the general index of employment in manufacturing industries from June, 1914, to August, 1926, and the general index of pay-roll totals from November, 1915, to August, 1926:

TABLE 7.—GENERAL INDEX OF EMPLOYMENT AND OF PAY-ROLL TOTALS IN MANUFACTURING INDUSTRIES

Employment (June, 1914, to August, 1926)

[Monthly average, 1923=100]

Month	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
January.....		91.9	104.6	117.0	115.5	110.1	116.1	76.8	87.0	98.0	95.4	90.0	93.3
February.....		92.9	107.4	117.5	114.7	103.2	115.6	82.3	87.7	99.6	96.6	91.6	94.3
March.....		93.9	109.6	117.4	116.5	104.0	116.9	83.9	83.2	101.8	96.4	92.3	93.7
April.....		93.9	109.0	115.0	115.0	103.6	117.1	83.0	82.4	101.8	94.5	92.1	92.8
May.....		94.9	109.5	115.1	114.0	106.3	117.4	84.5	84.3	101.8	90.8	90.9	91.7
June.....	98.9	95.9	110.0	114.8	113.4	108.7	117.9	84.9	87.1	101.9	87.9	90.1	91.3
July.....	95.9	94.9	110.3	114.2	114.6	110.7	110.0	84.5	86.8	100.4	84.8	89.3	89.8
August.....	92.9	95.9	110.0	112.7	114.5	109.9	109.7	85.6	88.0	99.7	85.0	89.9	90.7
September.....	94.9	98.9	111.4	110.7	114.2	112.1	107.0	87.0	90.6	99.8	86.7	90.9	-----
October.....	94.9	108.8	112.9	113.2	111.5	106.8	102.5	88.4	92.6	99.3	87.9	92.3	-----
November.....	93.9	103.8	114.5	115.6	113.4	110.0	97.3	89.4	94.5	98.7	87.8	92.5	-----
December.....	92.9	105.9	115.1	117.2	113.5	113.2	91.1	89.9	96.6	96.9	89.4	92.6	-----
Average.....	194.9	97.0	110.4	115.0	114.2	108.2	109.9	85.1	88.4	100.0	90.3	91.2	92.2

Pay-roll totals (November, 1915, to August, 1926)

Month	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926
January.....		52.1	60.8	79.6	104.2	126.6	80.6	71.5	91.8	94.5	90.0	94.9
February.....		57.8	70.5	79.8	95.0	124.8	82.4	76.7	95.2	99.4	95.1	98.9
March.....		60.0	73.6	88.2	95.4	133.0	83.3	74.2	100.3	99.0	96.6	99.1
April.....		59.7	69.4	88.8	94.5	130.6	82.8	72.6	101.3	96.9	94.2	97.2
May.....		62.1	75.8	94.5	96.7	135.7	81.8	76.9	104.8	92.4	94.4	95.6
June.....		62.5	76.1	94.3	100.2	138.0	81.0	82.0	104.7	87.0	91.7	95.5
July.....		58.7	73.1	97.5	102.5	124.9	76.0	74.1	99.9	80.8	89.6	91.2
August.....		60.9	75.0	105.3	105.3	132.2	79.0	79.3	99.3	83.5	91.4	94.6
September.....		92.9	74.4	106.6	111.6	128.2	77.8	82.7	100.0	86.0	90.4	-----
October.....		65.5	82.2	110.3	105.5	123.0	76.8	86.0	102.3	88.5	96.2	-----
November.....	53.8	60.2	87.4	104.1	111.3	111.3	77.2	89.8	101.0	87.6	96.2	-----
December.....	56.0	71.0	87.8	111.2	121.5	102.4	81.5	92.9	98.9	91.7	97.3	-----
Average.....	54.9	61.9	76.3	96.7	103.6	125.9	68.0	79.9	100.0	90.6	93.6	95.9

¹ Average for 7 months.

² Average for 8 months

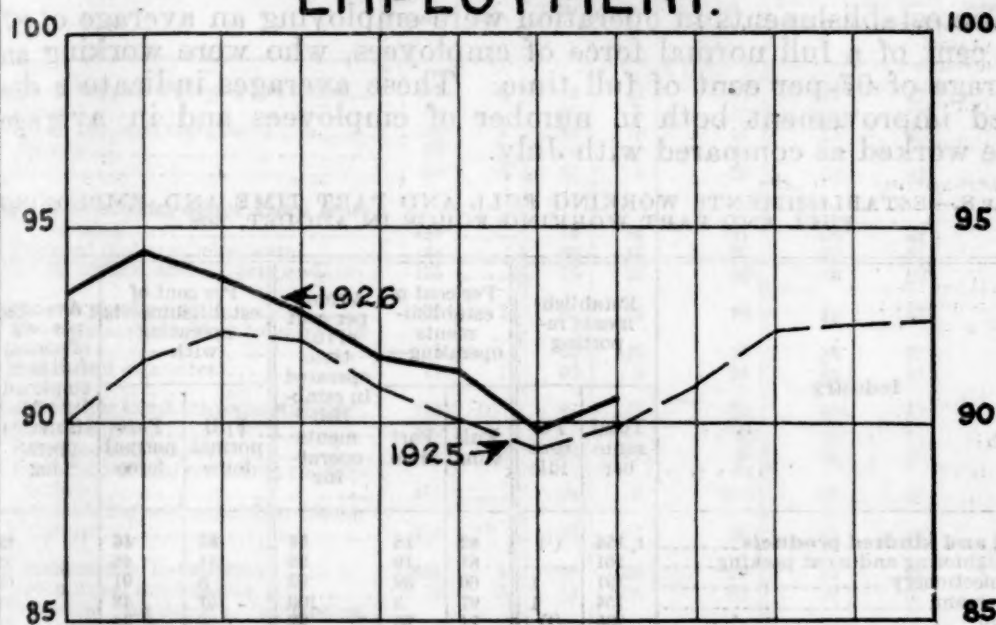
³ Average for 2 months.

MANUFACTURING INDUSTRIES.

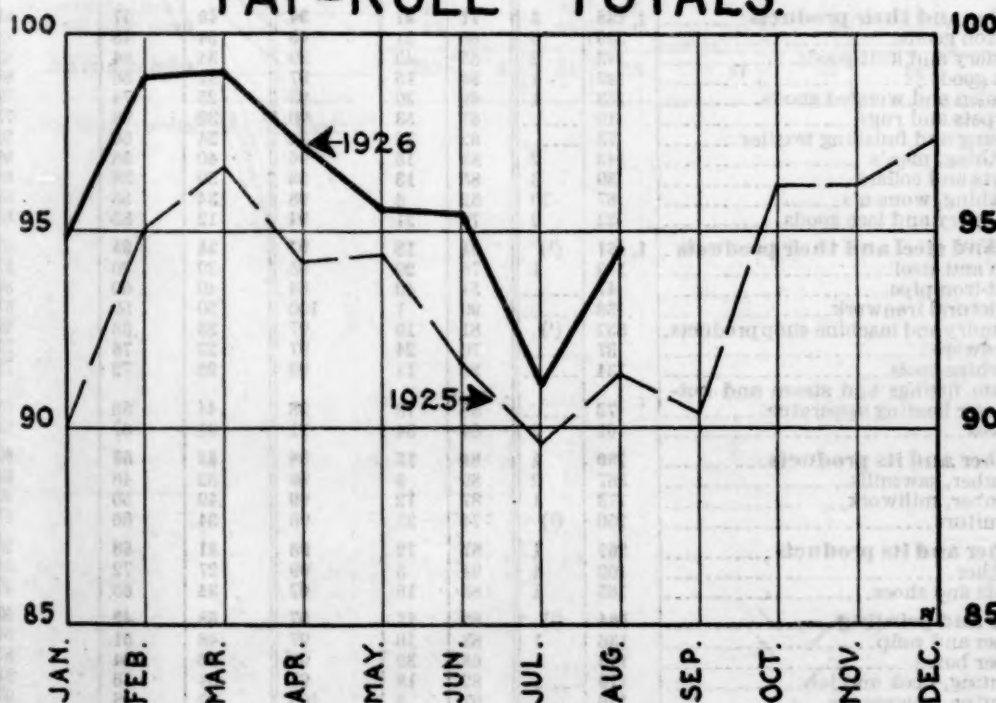
MONTHLY INDEXES — 1925 & 1926.

MONTHLY AVERAGE 1923 = 100.

EMPLOYMENT.



PAY-ROLL TOTALS.



Proportion of Time Worked and Force Employed in Manufacturing Industries in August, 1926

REPORTS from 7,388 establishments in August show that 1 per cent were idle, 81 per cent were operating on a full-time schedule, and 18 per cent on a part-time schedule; 45 per cent had a full normal force of employees and 54 per cent were operating with a reduced force.

The establishments in operation were employing an average of 87 per cent of a full normal force of employees, who were working an average of 97 per cent of full time. These averages indicate a decided improvement both in number of employees and in average time worked as compared with July.

TABLE 8.—ESTABLISHMENTS WORKING FULL AND PART TIME AND EMPLOYING FULL AND PART WORKING FORCE IN AUGUST, 1926

Industry	Establishments reporting		Per cent of establishments operating—		Average per cent of full time operated in establishments operating	Per cent of establishments operating with—		Average per cent of normal full force employed by establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Food and kindred products	1,154	(1)	83	18	96	53	46	89
Slaughtering and meat packing	161		81	19	98	54	46	92
Confectionery	191	1	60	39	92	8	91	68
Ice cream	154	1	97	3	100	51	48	93
Flour	236	(1)	74	26	92	66	34	91
Baking	403	(1)	91	8	98	68	32	96
Sugar refining, cane	10		70	30	93	60	40	87
Textiles and their products	1,238	3	71	27	94	40	57	85
Cotton goods	399	3	66	31	93	54	43	88
Hosiery and knit goods	143	2	55	43	89	34	64	83
Silk goods	149	1	84	15	97	31	68	85
Woolen and worsted goods	153	1	69	30	93	25	74	79
Carpets and rugs	19		47	53	90	32	68	77
Dyeing and finishing textiles	73		62	38	94	34	66	86
Clothing, men's	143	2	83	15	96	40	58	86
Shirts and collars	39	3	85	13	98	59	38	89
Clothing, women's	87	10	82	8	98	34	55	85
Millinery and lace goods	33	3	76	21	94	12	85	66
Iron and steel and their products	1,461	(1)	81	18	97	34	65	83
Iron and steel	142	1	78	20	95	29	70	87
Cast-iron pipe	47		51	49	84	40	60	89
Structural ironwork	136		99	1	100	50	50	87
Foundry and machine-shop products	832	(1)	81	19	97	33	66	80
Hardware	37		76	24	97	22	78	79
Machine tools	134		80	11	99	28	72	72
Steam fittings and steam and hot-water heating apparatus	72		88	13	98	44	56	88
Stoves	61	2	64	34	91	31	67	83
Lumber and its products	790	1	84	15	98	45	53	90
Lumber, sawmills	367	2	89	9	99	52	46	92
Lumber, millwork	173	1	87	12	99	49	50	90
Furniture	250	(1)	74	25	96	34	66	87
Leather and its products	267	1	87	12	98	31	68	88
Leather	102	1	94	5	99	27	72	84
Boots and shoes	165	1	83	16	97	34	65	90
Paper and printing	564	(1)	83	17	97	58	42	93
Paper and pulp	136	1	83	16	97	48	51	94
Paper boxes	113		68	32	96	36	64	87
Printing, book and job	179		82	18	97	54	46	91
Printing, newspaper	136		97	3	100	92	8	99
Chemicals and allied products	187	4	86	11	99	48	49	89
Chemicals	70	4	89	7	99	59	37	92
Fertilizers	77	5	77	18	98	21	74	61
Petroleum refining	40		98	3	100	80	20	96

¹ Less than one-half of 1 per cent.

TABLE 8.—ESTABLISHMENTS WORKING FULL AND PART TIME AND EMPLOYING FULL AND PART WORKING FORCE IN AUGUST, 1926—Continued

Industry	Establishments reporting		Per cent of establishments operating—		Average per cent of full time operated in establishments operating	Per cent of establishments operating with—		Average per cent of normal full force employed by establishments operating
	Total number	Per cent idle	Full time	Part time		Full normal force	Part normal force	
Stone, clay, and glass products	503	3	85	11	97	48	49	90
Cement.....	69	—	97	3	100	43	57	93
Brick, tile, and terra cotta.....	330	4	85	12	97	51	45	91
Pottery.....	39	—	74	26	96	23	77	86
Glass.....	65	5	86	9	98	54	42	89
Metal products, other than iron and steel	149	—	79	31	97	38	62	82
Stamped and enameled ware.....	44	—	86	14	97	39	61	84
Brass, bronze, and copper products.....	105	—	76	24	96	38	62	81
Tobacco products	86	1	85	14	98	45	53	87
Chewing and smoking tobacco and snuff.....	15	—	60	40	93	33	67	87
Cigars and cigarettes.....	71	1	90	8	99	48	51	87
Vehicles for land transportation	725	(1)	83	17	98	53	47	88
Automobiles.....	129	—	67	33	94	23	77	81
Carriages and wagons.....	47	4	77	19	96	38	57	73
Car building and repairing, electric-railroad.....	171	—	95	5	100	63	37	95
Car building and repairing, steam-railroad.....	378	(1)	83	17	98	61	39	89
Miscellaneous industries	264	1	80	20	97	38	61	84
Agricultural implements.....	79	3	73	24	97	30	67	83
Electrical machinery, apparatus, and supplies.....	90	—	88	12	99	52	48	90
Pianos and organs.....	21	—	76	24	95	52	48	93
Rubber boots and shoes.....	6	—	67	33	97	17	83	73
Automobile tires.....	46	—	70	30	94	35	65	85
Shipbuilding, steel.....	22	—	95	5	100	5	95	57
All industries	7,388	1	81	18	97	45	54	87

¹ Less than one-half of 1 per cent.

Employment and Earnings of Railroad Employees, July, 1925, and June and July, 1926

THE following table shows the number of employees and the earnings in various occupations among railroad employees in July, 1925, and in June and July, 1926.

The figures are for Class I roads—that is, all roads having operating revenues of \$1,000,000 a year and over.

EMPLOYMENT AND EARNINGS OF RAILROAD EMPLOYEES, JULY, 1925, AND JUNE AND JULY, 1926

[From monthly reports of Interstate Commerce Commission. As data for only the more important occupations are shown separately, the group totals are not the sum of the items under the respective groups; the grand totals will be found on pp. 160 and 162]

Occupation	Number of employees at middle of month			Total earnings		
	July, 1925	June, 1926	July, 1926	July, 1925	June, 1926	July, 1926
Professional, clerical, and general	282,466	285,376	286,771	\$38,611,518	\$39,067,056	\$39,612,098
Clerks.....	166,918	167,554	168,281	21,660,124	21,697,276	22,059,980
Stenographers and typists.....	25,124	25,482	25,463	3,078,684	3,136,833	3,145,593
Maintenance of way and structures	431,517	458,306	473,517	40,204,591	42,955,373	44,025,554
Laborers, extra gang and work train.....	71,330	80,843	86,635	5,740,192	6,663,632	7,036,962
Laborers, track and roadway section.....	224,455	235,624	242,737	10,857,117	17,790,825	18,216,799
Maintenance of equipment and stores	517,921	516,753	517,189	66,977,846	67,119,075	67,513,001
Carmen.....	115,066	112,092	112,328	16,675,358	16,441,246	16,553,702
Machinists.....	60,420	60,723	60,353	9,420,513	9,509,989	9,498,530
Skilled trades helpers.....	112,796	113,791	113,824	12,253,077	12,454,154	12,504,663
Laborers (shops, engine houses, power plants, and stores).....	42,662	42,196	42,736	4,074,223	3,960,663	4,059,908
Common laborers (shops, engine houses, power plants, and stores).....	59,014	60,565	60,589	4,807,146	4,958,741	4,967,996
Transportation, other than train, engine, and yard	208,873	209,525	210,666	25,696,657	25,523,339	26,088,564
Station agents.....	31,065	30,655	30,691	4,836,438	4,737,393	4,849,191
Telegraphers, telephoners, and towermen.....	25,781	25,479	25,481	3,869,729	3,775,045	3,916,469
Truckers (stations, warehouses, and platforms).....	38,170	38,878	38,389	3,585,188	3,603,498	3,577,261
Crossing and bridge flagmen and gatemen.....	22,914	22,485	22,528	1,730,916	1,695,329	1,696,488
Transportation (yardmasters, switch tenders, and hostlers)	23,845	24,028	24,233	4,474,597	4,444,910	4,594,934
Transportation, train and engine	314,600	322,830	327,995	62,449,416	62,464,309	65,261,287
Road conductors.....	36,070	36,751	37,412	8,571,300	8,452,846	8,871,204
Road brakemen and flagmen.....	72,517	73,777	75,140	12,640,078	12,444,503	13,067,538
Yard brakemen and yard helpers.....	51,031	53,447	53,956	8,608,667	8,872,773	9,166,769
Road engineers and motormen.....	42,886	43,639	44,596	11,465,031	11,322,372	11,894,315
Road firemen and helpers.....	44,416	44,829	45,933	8,535,366	8,416,119	8,837,159

State Reports on Employment

California

THE following data, taken from the August, 1926, Labor Market Bulletin, issued by the Bureau of Labor Statistics of California, show changes in volume of employment and pay roll from June to July, 1926, in 741 establishments in that State:

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN 741 CALIFORNIA ESTABLISHMENTS BETWEEN JUNE AND JULY, 1926

Industry	Number of firms reporting	Employees		Weekly pay roll	
		Number in July, 1926	Per cent of increase (+) or decrease (-) as compared with June, 1926	Amount in July, 1926	Per cent of increase (+) or decrease (-) as compared with June, 1926
Stone, clay, and glass products:					
Miscellaneous stone and mineral products.....	11	1,851	-5.2	\$55,160	-9.1
Lime, cement, plaster.....	8	2,284	+1.7	68,143	-2.2
Brick, tile, pottery.....	23	3,292	-6.7	74,701	-13.3
Glass.....	5	848	-3.5	27,531	-3.4
Total.....	47	8,275	-3.8	225,535	-7.9
Metals, machinery, and conveyances:					
Agricultural implements.....	6	1,324	-19.8	37,051	-19.4
Automobiles, including bodies and parts.....	14	3,067	-4.3	98,493	+1.6
Brass, bronze, and copper products.....	9	1,083	-8.3	29,772	-3.9
Engines, pumps, boilers, and tanks.....	10	716	-6.6	24,515	-20.6
Iron and steel forgings, bolts, nuts, etc.....	8	2,986	-9	87,795	-12.9
Structural and ornamental steel.....	15	4,873	+8	140,886	-7.7
Ship and boat building and naval repairs.....	5	4,852	-1.8	163,386	-2.6
Tin cans.....	3	2,660	+10.9	71,212	+8.0
Other iron foundry and machine-shop products.....	66	7,299	-6	205,703	-10.1
Other sheet metal products.....	24	1,777	+2.4	52,062	-1.7
Cars, locomotives, and railway repair shops.....	18	8,943	+2.7	246,979	-6.1
Total.....	178	139,625	-5	1,157,854	-6.4
Wood manufactures:					
Sawmills and logging.....	22	12,559	-1.1	318,074	-15.3
Planing mills, sash and door factories, etc.....	48	11,450	+1.3	313,889	-4.6
Other wood manufactures.....	45	4,965	+2	138,695	-1.9
Total.....	115	28,974	+1	770,658	-8.9
Leather and rubber goods:					
Tanning.....	7	722	+5.6	18,967	-1.5
Finished leather products.....	6	516	-3.2	11,293	-4
Rubber products.....	8	2,736	+6.6	78,022	+13.3
Total.....	21	3,974	+5.0	108,282	+8.9

¹ As given in the report; not the correct sum of the items.

PER CENT OF CHANGE IN NUMBER OF EMPLOYEES AND IN TOTAL AMOUNT OF WEEKLY PAY ROLL IN 741 CALIFORNIA ESTABLISHMENTS BETWEEN JUNE AND JULY, 1926—Continued

Industry	Number of firms reporting	Employees		Weekly pay roll	
		Number in July, 1926	Per cent of increase (+) or decrease (-) as compared with June, 1926	Amount in July, 1926	Per cent of increase (+) or decrease (-) as compared with June, 1926
Chemicals, oils, paints, etc.:					
Explosives.....	4	530	-0.7	\$15,020	-8.0
Mineral oil refining.....	10	14,886	-5	564,927	-2
Paints, dyes, and colors.....	7	702	+6.9	17,764	+4.5
Miscellaneous chemical products.....	12	2,214	+11.0	55,792	+9.8
Total.....	33	18,332	+1.0	653,503	+6
Printing and paper goods:					
Paper boxes, bags, cartons, etc.....	9	2,122	+5	47,383	-11.5
Printing.....	56	2,511	+2.0	89,810	+2.3
Publishing.....	18	3,755	-2.7	143,669	-1.1
Other paper products.....	8	950	+3.0	20,509	-7.5
Total.....	91	9,338	-2	301,371	-2.4
Textiles:					
Knit goods.....	13	1,087	-5.4	19,222	-9.3
Other textile products.....	7	1,574	+8	30,637	-8.0
Total.....	20	2,661	-1.8	49,859	-8.5
Clothing, millinery, and laundering:					
Men's clothing.....	23	2,658	+2.2	54,799	-2.6
Women's clothing.....	12	1,085	-8.1	19,914	-10.2
Millinery.....	7	456	+7.6	8,741	+12.2
Laundries, cleaning, and dyeing.....	23	3,368	+4	77,129	-9
Total.....	65	7,567	+1	160,583	-2.1
Foods, beverages, and tobacco:					
Canning and preserving of fruits and vegetables.....	25	27,750	+83.6	400,570	+55.7
Canning and packing of fish.....	8	636	+6.4	7,077	+17.3
Confectionery and ice cream.....	29	1,815	-2.5	45,236	-4.2
Groceries, not elsewhere specified.....	5	515	-4.1	11,220	-6.9
Bread and bakery products.....	20	3,821	-1.6	109,428	-1
Sugar.....	6	3,009	+3.1	74,734	-8.7
Slaughtering and meat products.....	15	2,630	-2.8	79,128	-1.3
Cigars and other tobacco products.....	5	1,016	-5	18,662	-3
Beverages.....	4	436	-3.3	13,283	+2.6
Dairy products.....	10	2,615	+2.2	84,239	-2
Flour and grist mills.....	8	768	+14.5	22,956	+13.5
Ice manufactures.....	5	1,015	+5	34,462	+5
Other food products.....	12	811	+18.6	16,420	+6.9
Total.....	152	46,837	+37.7	917,415	+17.6
Water, light, and power.....	5	9,174	-2.0	278,853	-1.8
Miscellaneous.....	14	2,217	+1	55,668	+2.3
Total, all industries.....	741	176,974	+7.6	4,679,581	-9

Illinois

THE following statistics, showing the changes in employment and earnings in Illinois factories in August, 1926, as compared with July, 1926, are taken from the August, 1926, issue of the Labor Bulletin, published by the Illinois Department of Labor:

CHANGES IN EMPLOYMENT AND EARNINGS IN ILLINOIS FACTORIES FROM JULY TO AUGUST, 1926

Industry	Per cent of increase (+) or decrease (-), July to August, 1926			
	Employment			Total earnings
	Male	Female	Both sexes	
Stone, clay, and glass products:				
Miscellaneous stone and mineral products.....	+1.5	+1.5	+1.5	-5.4
Lime, cement, and plaster.....	-2.2	0	-2.1	-5.1
Brick, tile, and pottery.....	-.4	-6.5	-.5	-6.6
Glass.....	-1.2	+17.0	+6	-2.0
Total.....	-.4	+11.8	+2	-4.3
Metals, machinery, conveyances:				
Iron and steel.....	-1.5	-4.5	-1.5	-10.7
Sheet-metal work and hardware.....	+2	-3.9	+3.0	-3.9
Tools and cutlery.....	-9.2	-13.2	-9.6	-11.0
Cooking, heating, ventilating apparatus.....	-7.3	-5.3	-7.2	-15.3
Brass, copper, zinc, babbitt metal.....	-1.3	-8.9	-1.4	-3.9
Cars and locomotives.....	-3.6	-4.9	-3.6	-11.4
Automobiles and accessories.....	-2.6	+6.5	-1.2	-3.5
Machinery.....	-1.2	-1.8	-1.0	-11.3
Electrical apparatus.....	-.9	-3.9	-.7	-1.6
Agricultural implements.....	-5.6	+16.0	-5.5	-4.8
Instruments and appliances.....	-30.0	-38.8	-27.1	-26.7
Watches, watchcases, clocks, and jewelry.....	+6	+5	+5	+3.8
Total.....	-2.7	-1.7	-1.6	-8.6
Wood products:				
Sawmill and planing-mill products.....	+2.4	-11.8	+2.1	-4.9
Furniture and cabinet work.....	-.2	-3.2	-.4	-8.1
Pianos, organs, and other musical instruments.....	-2.3	+5.8	-1.5	-22.6
Miscellaneous wood products.....	-1.7	-.5	-1.6	-3.7
Household furnishings.....	+14.6	-16.5	+4.1	-2.9
Total.....	+3	-5.2	-.1	+9.3
Furs and leather goods:				
Leather.....	+3.1	+35.8	+7.3	-.7
Furs and fur goods.....	-46.7	-30.0	-40.0	-44.6
Boots and shoes.....	+7.9	+8.0	+4.1	+15.5
Miscellaneous leather goods.....	+2.2	+8.7	+6.3	+2.8
Total.....	+5.1	+9.6	+4.4	+11.2
Chemicals, oils, paints, etc.:				
Drugs and chemicals.....	-3.2	-39.3	-20.9	-17.2
Paints, dyes, and colors.....	-6.0	-16.3	-2.8	-5.4
Mineral and vegetable oil.....	-.9	-11.8	-1.5	-7.1
Miscellaneous chemical products.....	+3.0	+5.7	+3.2	+1.4
Total.....	-.5	-20.8	-3.2	-5.5
Printing and paper goods:				
Paper boxes, bags, and tubes.....	+8	+3.1	+1.5	-.3
Miscellaneous paper goods.....	+2	+8	+4	-.6
Job printing.....	+6.6	-8.2	+6.9	+6.2
Newspapers and periodicals.....	+6	-4.0	+2	-3.0
Edition bookbinding.....	-3.6	-9.7	-5.3	-9.8
Total.....	+3.1	+3.4	+3.0	+1.3
Textiles:				
Cotton and woolen goods.....	-1.3	+3.6	+1.0	+1.8
Knit goods, cotton and woolen hosiery.....	-1.9	-.9	+2.4	-25.0
Thread and twine.....	+11.2	-1.6	-5.7	0
Total.....	-2.0	+3	+1.2	-15.8

CHANGES IN EMPLOYMENT AND EARNINGS IN ILLINOIS FACTORIES FROM JULY
TO AUGUST, 1926—Continued

Industry	Per cent of increase (+) or decrease (-), July to August, 1926			
	Employment			Total earnings
	Male	Female	Both sexes	
Clothing, millinery, laundering:				
Men's clothing.....	+3.3	-0.7	+2.0	+7.8
Men's shirts and furnishings.....	-50.0	-46.2	+7.2	+7.7
Overalls and work clothing.....	-1.5	+1.3	+1.0	+1.1
Men's hats and caps.....	+12.9	-15.6	-1.6	-4.5
Women's clothing.....	+23.2	+3.1	+7.7	+6.5
Women's underwear.....	+8.1	-2.0	-8	-6.2
Women's hats.....	+13.4	+3.5	+6.0	+5.4
Laundering, cleaning, and dyeing.....	-1.9	+6.1	+3.5	-1.4
Total.....	+3.5	+8	+2.9	+5.4
Food, beverages, and tobacco:				
Flour, feed, and other cereal products.....	-15.4	-3.4	-14.5	+3.2
Fruit and vegetable canning and preserving.....	+106.0	+79.2	+101.5	+168.8
Miscellaneous groceries.....	-5.3	-5.6	+8.5	-2.0
Slaughtering and meat packing.....	+1.5	+8.3	+2.3	+2.3
Dairy products.....	-2.3	-1.7	-2.3	+1.9
Bread and other bakery products.....	-2.5	+7	-1.7	-2.8
Confectionery.....	-2.0	+17.5	+6.2	-2.0
Beverages.....	-3.1	+12.2	-3.0	-9.5
Cigars and other tobacco products.....	-6.6	+4	-2.8	-2.8
Manufactured ice.....	+1.3		+1.3	+1.3
Ice cream.....	+1.8	-15.1	-8	+9.3
Total.....	+2.1	+6.8	+3.3	+2.3
Total, all manufacturing industries.....	-7	+1.1	+1	-4.2
Trade—Wholesale and retail:				
Department stores.....	-3.0	-2.4	-2.6	-6.2
Wholesale dry goods.....	-3.8	0	-1.8	-1.2
Wholesale groceries.....	-3	-5.5	-1.7	+1.3
Mail-order houses.....	-1.9	-1.7	-2.6	-3.0
Total.....	-2.1	-2.0	-2.5	-3.4
Public utilities:				
Water, light, and power.....	+9	-2.2	+1.3	-1.4
Telephone.....	+1.6	+1.4	+1.4	-2
Street railways.....	+8	-5.1	+8	-1.7
Railway car repair shops.....	-1.9	+2.3	-1.8	-6.9
Total.....	+3	+1.2	+8	-1.9
Coal mining.....	-4		-4	-6.0
Building and contracting:				
Building construction.....	-2.4		-2.4	+6.2
Road construction.....	+10.5		+10.5	+19.8
Miscellaneous contracting.....	-8.2		-8.2	-27.0
Total.....	-2.6		-2.6	+1.0
Total, all industries.....	-6	+8	0	-3.5

Iowa

THE following figures, from the August, 1926, issue of the Iowa Employment Survey, published by the bureau of labor of that State, show changes in volume of employment in Iowa from July to August, 1926:

CHANGES IN VOLUME OF EMPLOYMENT IN IOWA, JULY TO AUGUST, 1926

Industry	Number of firms reporting	Employees on pay roll, August, 1926		Industry	Number of firms reporting	Employees on pay roll, August, 1926	
		Number	Per cent of increase (+) or decrease (-) compared with July, 1926			Number	Per cent of increase (+) or decrease (-) compared with July, 1926
Food and kindred products:				Leather products:			
Meat packing.....	7	5,486	+9.8	Boots and shoes.....			
Cereals.....	2	274	+9.2	Saddlery and harness.....	5	144	+4.3
Flour.....	2	66	.0	Fur goods and tanning.....	5	112	-11.8
Bakery products.....	9	978	-3.0	Gloves and mittens.....	3	283	-.4
Confectionery.....	6	168	-1.2	Total.....	13	539	-1.8
Poultry products, butter, etc.....	8	1,053	-5.1	Paper products, printing and publishing:			
Sugar, starch, sirup, glucose, etc.....	4	1,549	+1.8	Paper products.....	4	289	+18.9
Other food products, coffee, etc.....	8	545	+6.0	Printing and publishing.....	17	2,913	-2.3
Total.....	46	110,137	+5.2	Total.....	21	3,202	-.7
Textiles:				Patent medicines and compounds.....	9	590	+3.7
Clothing, men's.....	8	880	-.6	Stone and clay products:			
Millinery.....	2	166	+6.4	Cement, plaster, gypsum.....	8	2,115	-.4
Clothing, women's, and woolen goods.....	3	601	+6.7	Brick and tile (clay).....	13	1,102	+4.7
Hosiery, awnings, etc.....	5	561	-16.0	Marble, granite, crushed rock, and stone.....	2	73	+14.1
Buttons, pearl.....	8	595	+7.0	Total.....	23	3,290	+1.5
Total.....	26	2,803	-.9	Tobacco and cigars.....	5	330	-1.2
Iron and steel works:				Railway car shops.....	5	2,532	-9.5
Foundry and machine shops.....	29	2,088	-7.2	Various industries:			
Brass, bronze products, plumbers' supplies.....	5	337	+2.4	Auto tires and tubes.....	2	302	-4.7
Autos, tractors, and engines.....	8	2,992	+1.4	Brooms and brushes.....	4	132	-6.4
Furnaces.....	7	431	+9	Laundries.....	4	172	-6.0
Pumps.....	3	334	-1.5	Mercantile.....	5	1,747	-6.8
Agricultural implements.....	9	809	-8.4	Public service.....	3	1,334	+7
Washing machines.....	8	2,216	+5	Seeds.....	3	199	-7.0
Total.....	69	9,207	-1.9	Wholesale houses.....	23	1,253	.0
Lumber products:				Commission houses.....	5	160	+3.2
Mill work, interiors, etc.....	16	2,547	+4.1	Other industries.....	8	968	+1.3
Furniture, desks, etc.....	10	1,014	+17.9	Total.....	57	6,267	-2.4
Refrigerators.....	3	163	+1.9	Grand total.....	311	42,920	+4
Coffins, undertakers' supplies.....	4	148	-2.6				
Carriages, wagons, truck bodies.....	4	151	+1.3				
Total.....	37	4,023	+6.8				

¹ As given in the report; not the correct sum of the items.

Maryland

THE following report on volume of employment in Maryland from July to August, 1926, covering 42,281 employees and a pay roll totaling \$1,109,487, was furnished by the commissioner of labor and statistics of Maryland:

CHANGES IN EMPLOYMENT IN IDENTICAL ESTABLISHMENTS IN MARYLAND IN AUGUST, 1926

Industry	Estab-lish-ments report-ing for July and August	Employment		Pay roll	
		Number of em-ployees, August, 1926	Per cent of increase (+) or decrease (-) as compared with July, 1926	Amount, August, 1926	Per cent of increase (+) or decrease (-) as compared with July, 1926
Bakery.....	4	271	-1.2	\$9,953	+1.5
Beverages and soft drinks.....	3	178	+8.5	5,553	+4.4
Boots and shoes.....	4	378	-1.4	8,848	-6
Boxes, paper and fancy.....	9	518	+5	7,210	-2.6
Boxes, wooden.....	5	326	+6.1	5,838	+1.2
Brass and bronze.....	4	2,492	+4.0	56,004	-1.5
Brick, tile, etc.....	6	874	-19.8	20,328	-31.4
Brushes.....	5	699	-4.3	12,432	-4.1
Car building and repairing.....	4	4,512	+1.6	155,506	+4.3
Chemicals.....	6	1,343	+3.8	38,120	+6
Clothing, men's outer garments.....	5	2,458		69,496	+5.3
Clothing, women's outer garments.....	6	895	+1.4	11,318	+2.5
Confectionery.....	7	909	+4.3	11,998	+9.6
Cotton goods.....	5	2,023	-1.4	32,199	+9.4
Fertilizer.....	3	521	+4.6	11,281	-2.8
Food preparation.....	4	141	+1.8	3,701	+8.5
Foundry.....	10	1,194	+1	30,358	-1.0
Furnishing goods, men's.....	5	810	-4.6	11,218	-2.3
Furniture.....	10	927	+4.0	20,174	+9.3
Ice cream.....	3	248	+19.2	6,396	+5.0
Leather goods.....	4	609	+5.3	12,688	+3.1
Lithographing.....	3	498	-3.5	14,384	-5.1
Lumber and planing.....	9	652	-4	17,323	-1.2
Mattresses and spring beds.....	4	145	-7	3,194	-3.9
Pianos.....	3	909	+1.6	25,685	-1.3
Plumbers' supplies.....	4	1,759	+6	45,388	-4.6
Printing.....	9	1,248	+0.6	41,382	-4.3
Rubber tire manufacture.....	1	2,823	+8.5	179,668	+51.5
Shipbuilding.....	3	710	-3.3	22,498	+7.0
Shirts, etc.....	3	463	+3.8	6,086	+5.6
Silk goods.....	3	422	+14.9	6,946	+8.4
Stamping and enameling ware.....	5	1,125	-2.3	22,043	-2
Tinware.....	4	3,214	+12.5	67,842	+8.0
Tobacco.....	7	773	+4.4	12,112	-1.4
Umbrellas and canes.....	3	337	+4.0	5,349	-7
Miscellaneous.....	17	4,685	-4.9	100,824	+2.3

Massachusetts

A PRESS release from the Department of Labor and Industries of Massachusetts shows the following changes in volume of employment in various industries in that State from June to July, 1926:

NUMBER OF EMPLOYEES IN 981 MANUFACTURING ESTABLISHMENTS IN MASSACHUSETTS, WEEK INCLUDING OR ENDING NEAREST TO JUNE 15 AND JULY 15, 1926

Industry	Number of establishments	Number of wage earners employed			
		June, 1926	July, 1926		
			Full time	Part time	Total
Automobiles, including bodies and parts.....	17	3,681	1,240	2,236	3,476
Bookbinding.....	15	973	743	213	956
Boot and shoe cut stock and findings.....	46	1,994	1,563	661	2,224
Boots and shoes.....	66	19,743	13,482	7,332	20,814
Boxes, paper.....	27	2,021	1,312	771	2,083
Boxes, wooden packing.....	13	1,154	995	117	1,112
Bread and other bakery products.....	51	4,200	3,890	335	4,225
Carpets and rugs.....	5	3,471	129	3,308	3,437
Cars and general shop construction and repairs, steam railroads.....	4	2,891	2,197	656	2,853
Clothing, men's.....	29	3,818	2,240	1,460	3,700
Clothing, women's.....	34	1,566	775	526	1,301
Confectionery.....	13	2,934	543	2,517	3,060
Copper, tin, sheet iron, etc.....	15	441	450	12	462
Cotton goods.....	53	37,610	11,430	19,694	31,124
Cutlery and tools.....	24	5,064	3,852	1,091	4,943
Dyeing and finishing textiles.....	8	6,605	5,650	5,650	5,650
Electrical machinery, apparatus, and supplies.....	15	11,547	9,140	1,697	10,837
Foundry products.....	27	3,062	1,935	962	2,897
Furniture.....	32	3,256	2,445	749	3,194
Gas and by-products.....	13	1,147	1,173	1,173	1,173
Hosiery and knit goods.....	12	4,921	1,660	2,541	4,201
Jewelry.....	34	2,806	2,063	679	2,742
Leather, tanned, curried, and finished.....	24	3,724	2,573	1,476	4,049
Machine-shop products.....	44	8,215	7,464	857	8,321
Machine tools.....	22	1,971	1,446	474	1,920
Musical instruments.....	13	1,277	542	694	1,236
Paper and wood pulp.....	21	5,905	4,810	1,007	5,817
Printing and publishing, book and job.....	38	3,316	2,046	1,199	3,245
Printing and publishing, newspaper.....	18	2,361	2,347	30	2,377
Rubber footwear.....	3	9,546	6,410	6,410	6,410
Rubber goods.....	7	2,263	1,334	1,111	2,445
Silk goods.....	10	4,088	3,870	137	4,007
Slaughtering and meat packing.....	5	1,544	263	1,323	1,586
Stationery goods.....	8	1,482	1,378	36	1,414
Steam fitting and steam and hot-water heating apparatus.....	8	1,628	1,061	464	1,525
Stoves and stove linings.....	5	1,689	477	443	920
Textile machinery and parts.....	14	4,456	405	3,881	4,286
Tobacco.....	5	783	811	13	824
Woolen and worsted goods.....	57	17,734	6,369	11,374	17,743
All other industries.....	126	28,811	15,189	12,510	27,699
Total.....	981	225,698	122,052	90,236	212,288

New York

THE following statistics on changes in employment and pay rolls in New York State factories in July, 1926, were furnished by the New York State Department of Labor. The table is based on a fixed list of approximately 1,700 factories whose weekly pay roll for the middle week of July was \$13,995,475.

CHANGES IN EMPLOYMENT AND PAY ROLL IN NEW YORK STATE FACTORIES
FROM JULY, 1925, AND JUNE, 1926, TO JULY, 1926

Industry	Per cent of increase (+) or decrease (-)			
	June, 1926, to July, 1926		July, 1925, to July, 1926	
	Employment	Pay roll	Employment	Pay roll
Cement.....	+1.7	+3.3	+4.6	+9.5
Brick.....	-.5	-2.6	+15.4	+21.6
Pottery.....	+1.1	-2.9	-.4	+1.1
Glass.....	-12.0	-12.1	+23.5	+24.5
Pig iron.....	-3.7	-3.6	+16.7	+19.7
Structural iron.....	-4.4	-8.2	+2	+1.7
Hardware.....	+1.9	+2.2	+8.8	+12.7
Stamped ware.....	-1.0	+1.2	+3.8	+8.3
Cutlery.....	-13.3	-13.6	+3.4	+5.2
Steam and hot water.....	-4.6	-2.6	+8.8	+14.3
Stoves.....	-11.6	-13.3	-1.4	-10.0
Agricultural implements.....	-.7	+1.4	+1.0	-2.4
Electrical machinery, etc.....	-2.0	-1.8	+8.1	+11.3
Foundry.....	+9	-1.0	+8.1	+13.0
Autos and parts.....	-6.0	-11.4	-9.4	-10.6
Cars, locomotives, etc.....	-2.9	-2.8	+36.1	+48.9
Railway repair shops.....	-1.3	-5.9	+1.9	-.5
Millwork.....	+1	-2.4	-4.2	-1.2
Sawmills.....	-4.4	-3.0	-13.4	-12.0
Furniture and cabinet.....	-.9	-1.4	+3.0	+9.8
Furniture.....	-.2	-1.3	+5.1	+10.0
Pianos.....	-6.9	-8.2	+2.2	+7.1
Leather.....	-3.6	-4.0	+5.8	+14.4
Boots and shoes.....	+3.8	+8.4	-6.7	-4.7
Drugs.....	(1)	-4.7	+9.6	+9.4
Petroleum.....	-.1	-1.6	-6.6	-7.6
Paper boxes.....	-.4	-1.9	+8.0	+11.0
Printing:				
Newspapers.....	-5.6	-6.0	-1.9	+1.5
Book and job.....	-1.1	-5.0	+2.4	+6.1
Silk goods.....	-25.1	-26.7	-35.1	-38.4
Carpets.....	+8	+1.9	-2.3	-1.2
Woolens.....	-9.4	-9.6	-8.6	-6.0
Cotton goods.....	-.2	+1.4	+4.9	+4.9
Cotton and woolen.....	-16.8	-17.9	-21.1	-22.3
Dyeing.....	-4.2	-5.9	-6.7	-8.2
Men's clothing.....	+2.8	+2.3	-4.0	-6.7
Shirts and collars.....	-3.2	-7.9	-12.4	-15.3
Women's clothing.....	-28.7	-24.3	-25.9	-31.4
Women's headwear.....	-17.8	-10.2	-13.1	-1.7
Flour.....	-2.8	-.6	-3.9	-6.6
Sugar.....	-1.7	-1.8	+2.2	+1.6
Slaughtering.....	+5	+1.4	-5.7	-3.4
Bread.....	+2.2	+3	+2.4	+4.0
Confectionery.....	+4.0	-1.8	+4.4	+6.3
Cigars.....	-4.3	-6.6	-25.1	-25.1
Total.....	-2.1	-2.7	(1)	+3.0

¹ Less than one-tenth of 1 per cent.

Oklahoma

THE data given below, from the August 15, 1926, issue of the Oklahoma Labor Market, show the changes in employment and pay rolls in 710 establishments in Oklahoma from June to July, 1926:

CHANGES IN EMPLOYMENT AND PAY ROLLS IN 710 INDUSTRIAL ESTABLISHMENTS IN OKLAHOMA, JUNE TO JULY, 1926

Industry	Number of plants reporting	July, 1926			
		Employment		Pay roll	
		Number of employees	Per cent of increase (+) or decrease (-) as compared with June, 1926	Amount	Per cent of increase (+) or decrease (-) as compared with June, 1926
Cottonseed oil mills.....	13	179	+11.9	\$3,730	+17.7
Food production:					
Bakeries.....	35	567	+4.4	14,872	+2.6
Confections.....	7	30	-38.8	528	-42.6
Creameries and dairies.....	11	178	-1.7	3,493	-5.5
Flour mills.....	44	479	+38.0	11,017	+42.9
Ice and ice cream.....	33	585	+3.5	14,951	+3.4
Meat and poultry.....	14	1,603	-1.8	37,221	-4.5
Lead and zinc:					
Mines and mills.....	46	2,646	-9.3	69,889	-12.8
Smelters.....	17	2,075	-5.5	53,754	-8.7
Metals and machinery:					
Auto repairs, etc.....	29	1,384	+5.1	44,430	+5.6
Foundry and machine shops.....	38	1,238	+14.9	32,046	+1.2
Tank construction and erection.....	16	702	+1.3	17,673	+8.8
Oil industry:					
Production and gasoline extraction.....	123	4,683	-2.2	136,083	-6.6
Refineries.....	66	5,974	-1.5	202,730	+1.5
Printing: Job work.....	24	266	+4.4	7,808	-9.9
Public utilities:					
Steam-railroad shops.....	11	1,747	-1.4	48,124	-3.5
Street railways.....	6	678	-4.4	18,013	-1.1
Water, light, and power.....	50	1,219	+6.6	31,609	+1.2
Stone, clay, and glass:					
Brick and tile.....	11	446	+5.9	9,384	+6.7
Cement and plaster.....	6	1,028	-3.1	25,423	-8.4
Crushed stone.....	6	189	-31.0	2,785	-40.5
Glass manufacturing.....	9	954	-2.3	20,095	-3.9
Textiles and cleaning:					
Textile manufacturing.....	9	391	+6.0	5,679	+3.3
Laundries and cleaning.....	52	1,407	-1.5	24,643	-2.0
Woodworking:					
Sawmills.....	14	401	+7.5	5,511	+1.7
Millwork, etc.....	20	319	-7.5	8,091	-9.6
Total, all industries.....	710	31,368	-6.6	849,582	-1.7

PRICES AND COST OF LIVING

Retail Prices of Food in the United States

THE following tables are compiled from monthly reports of actual selling prices¹ received by the Bureau of Labor Statistics from retail dealers.

Table 1 shows for the United States retail prices of food, August 15, 1925, and July 15 and August 15, 1926, as well as the percentage changes in the year and in the month. For example, the retail price per pound of bacon was 49.3 cents on August 15, 1925; 52.3 cents on July 15, 1926; and 52.0 cents on August 15, 1926. These prices show an increase of 5 per cent in the year and a decrease of 1 per cent in the month.

The cost of the various articles of food combined shows a decrease of 2.9 per cent on August 15, 1926, as compared with August 15, 1925, and a decrease of 0.9 per cent on August 15, 1926, as compared with July 15, 1926.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, AUGUST 15, 1926, COMPARED WITH JULY 15, 1926, AND AUGUST 15, 1925

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (—), Aug. 15, 1926, compared with—	
		Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15, 1925	July 15, 1926
		Cents	Cents	Cents		
Sirloin steak.....	Pound.....	42.0	42.0	41.8	-0.4	-0.4
Round steak.....	do.....	36.2	36.3	36.2	0	-0.3
Rib roast.....	do.....	30.3	30.7	30.4	+0.3	-1
Chuck roast.....	do.....	22.1	22.7	22.5	+2	-1
Plate beef.....	do.....	13.9	14.5	14.3	+3	-1
Pork chops.....	do.....	40.0	41.7	40.5	+1	-3
Bacon.....	do.....	49.3	52.3	52.0	+5	-1
Ham.....	do.....	54.9	60.9	60.7	+11	-0.3
Lamb, leg of.....	do.....	38.7	40.3	39.2	+1	-3
Hens.....	do.....	36.2	39.2	37.9	+5	-3
Salmon, canned, red.....	do.....	32.3	38.1	38.2	+18	+0.3
Milk, fresh.....	Quart.....	13.9	13.8	13.9	0	+1
Milk, evaporated.....	15-16 oz. can.....	11.5	11.4	11.4	-1	0
Butter.....	Pound.....	54.1	50.1	50.6	-6	+1
Oleomargarine (all-butter substitutes).....	do.....	30.3	30.2	30.2	-0.3	0
Cheese.....	do.....	36.8	35.6	35.7	-3	+0.3
Lard.....	do.....	24.3	22.9	22.7	-7	-1
Vegetable lard substitute.....	do.....	25.9	25.9	25.9	0	0
Eggs, strictly fresh.....	Dozen.....	48.9	42.1	44.9	-8	+7
Bread.....	Pound.....	9.4	9.4	9.4	0	0

¹ In addition to retail prices of food and coal, the bureau publishes the prices of gas and electricity from each of 51 cities for the dates for which these data are secured.

TABLE 1.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, AUGUST 15, 1926, COMPARED WITH JULY 15, 1926, AND AUGUST 15, 1925—Continued

Article	Unit	Average retail price on—			Per cent of increase (+) or decrease (—), Aug. 15, 1926, compared with—	
		Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15, 1925	July 15, 1926
		Cents	Cents	Cents		
Flour.....	Pound.....	6.1	6.0	6.0	-2	0
Corn meal.....	do.....	5.4	5.1	5.1	-6	0
Rollod oats.....	do.....	9.2	9.1	9.0	-2	-1
Corn flakes.....	8-oz. pkg.....	10.9	10.9	10.9	0	0
Wheat cereal.....	28-oz. pkg.....	24.6	25.4	25.4	+3	0
Macaroni.....	Pound.....	20.4	20.2	20.2	-1	0
Rice.....	do.....	11.3	11.7	11.6	+3	-1
Beans, navy.....	do.....	10.3	9.2	9.2	-11	0
Potatoes.....	do.....	4.4	4.1	3.6	-18	-12
Onions.....	do.....	8.0	6.8	5.9	-26	-13
Cabbage.....	do.....	5.5	5.1	4.3	-22	-16
Beans, baked.....	No. 2 can.....	12.4	11.9	11.8	-5	-1
Corn, canned.....	do.....	18.4	16.4	16.4	-11	0
Peas, canned.....	do.....	18.4	17.4	17.5	-5	+1
Tomatoes, canned.....	do.....	13.7	11.8	11.8	-14	0
Sugar, granulated.....	Pound.....	7.0	6.9	7.0	0	+1
Tea.....	do.....	75.9	77.0	77.1	+2	+0.1
Coffee.....	do.....	50.9	51.1	51.0	+0.2	-0.2
Prunes.....	do.....	17.3	17.2	17.1	-1	-1
Raisins.....	do.....	14.4	14.8	14.8	+3	0
Bananas.....	Dozen.....	34.5	35.2	34.5	0	-2
Oranges.....	do.....	59.8	49.6	50.7	-15	+2
Weighted food index.....					-2.9	-0.9

Table 2 shows for the United States average retail prices of specified food articles on August 15, 1913, and on August 15 of each year from 1920 to 1926, together with percentage changes in August of each of these specified years, compared with August, 1913. For example, the retail price per pound of potatoes was 1.9 cents in August, 1913; 5.0 cents in August, 1920; 4.2 cents in August, 1921; 2.6 cents in August, 1922; 3.7 cents in August, 1923; 2.6 cents in August, 1924; 4.4 cents in August, 1925; and 3.6 cents in August, 1926.

As compared with August, 1913, these figures show increases of 163 per cent in August, 1920; 121 per cent in August, 1921; 37 per cent in August, 1922; 95 per cent in August, 1923; 37 per cent in August, 1924; 132 per cent in August, 1925; and 89 per cent in August, 1926.

The cost of the various articles of food combined showed an increase of 54.2 per cent in August, 1926, as compared with August, 1913.

Table 3 shows the changes in the retail prices of each of 32 articles of food for which this information has been secured since 1913, as well as the changes in the amounts of these articles that could be purchased for \$1 in specified years, 1913 to 1925, and in July and August 1926.

TABLE 2.—AVERAGE RETAIL PRICES OF SPECIFIED FOOD ARTICLES AND PER CENT OF INCREASE OR DECREASE, AUGUST 15 OF CERTAIN SPECIFIED YEARS COMPARED WITH AUGUST 15, 1913

[Percentage changes of five-tenths of 1 per cent and over are given in whole numbers]

Article	Unit	Average retail price on Aug. 15—								Per cent of increase, Aug. 15 of each specified year compared with Aug. 15, 1913—							
		1913	1920	1921	1922	1923	1924	1925	1926	1920	1921	1922	1923	1924	1925	1926	
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.								
Sirloin steak	Pound	26.4	47.2	40.0	39.0	41.1	40.7	42.0	41.8	79	52	48	56	54	59	58	
Round steak	do	23.2	43.6	35.6	34.1	35.5	34.8	36.2	36.2	88	53	47	53	50	56	56	
Rib roast	do	20.2	34.9	29.1	28.2	29.2	29.1	30.3	30.4	73	44	40	45	44	50	50	
Chuck roast	do	16.5	27.4	20.8	20.0	20.8	21.0	22.1	22.5	66	26	21	26	27	34	36	
Plate beef	do	12.2	18.5	13.5	12.6	12.7	13.1	13.9	14.3	52	11	3	4	7	14	17	
Pork chops	do	21.9	45.9	38.0	35.1	32.1	34.8	40.0	40.5	110	74	60	47	59	83	85	
Bacon	do	28.3	54.9	43.7	40.6	39.2	38.3	49.3	52.0	94	54	43	39	35	74	84	
Ham	do	28.4	60.0	52.9	50.8	46.3	46.6	54.9	60.7	111	86	79	63	64	93	114	
Lamb, leg of	do	18.9	39.7	34.3	36.0	37.2	37.3	38.7	39.2	110	81	90	97	97	105	107	
Hens	do	21.5	45.0	38.9	34.9	34.5	34.8	36.2	37.9	109	81	62	60	62	68	76	
Salmon, canned, red	do	13.8	36.0	31.9	31.2	31.2	31.2	32.3	38.2								
Milk, fresh	Quart	8.8	17.0	14.3	13.0	13.7	13.7	13.9	13.9	93	63	48	56	56	58	58	
Milk, evaporated	(²)	15.6	13.5	10.8	12.2	11.1	11.1	11.5	11.4								
Butter	Pound	35.4	67.0	51.2	44.2	51.8	48.3	54.1	50.6	89	45	25	46	36	53	43	
Oleomargarine (all butter substitutes).	do	38.8	28.7	27.1	28.3	29.6	30.3	30.2	30.2								
Cheese	do	22.0	40.5	32.6	31.8	36.3	34.4	36.8	35.7	84	48	45	65	56	67	62	
Lard	do	16.1	27.9	18.1	17.2	17.1	19.3	24.3	22.7	73	12	7	6	20	51	41	
Vegetable lard substitute.	do	34.5	21.1	22.9	22.8	25.2	25.9	25.9	25.9								
Eggs, strictly fresh	Dozen	33.0	63.6	47.6	37.1	41.5	44.6	48.9	44.9	93	44	12	26	35	48	36	
Bread	Pound	5.6	11.9	9.7	8.7	8.7	8.8	9.4	9.4	113	73	55	55	57	68	68	
Flour	do	3.3	8.4	5.7	5.1	4.5	5.1	6.1	6.0	155	73	55	36	55	85	82	
Corn meal	do	3.0	6.9	4.5	3.9	4.1	4.7	5.4	5.1	130	50	30	37	57	80	70	
Rolled oats	do	11.2	10.0	8.7	8.7	8.8	8.8	9.2	9.0								
Corn flakes	(³)	14.6	12.2	9.8	9.7	9.6	10.9	10.9	10.9								
Wheat cereal	(⁴)	30.3	29.8	25.7	24.4	24.3	24.6	25.4	25.4								
Macaroni	Pound	21.7	20.7	20.0	19.8	19.6	20.4	20.2	20.2								
Rice	do	8.7	18.3	8.8	9.6	9.4	10.2	11.3	11.6	110	1	10	8	17	30	33	
Beans, navy	do	11.7	7.9	11.3	11.0	9.7	10.3	9.2	9.2								
Potatoes	do	1.9	5.0	4.2	2.6	3.7	2.6	4.4	3.6	163	121	37	95	37	132	89	
Onions	do	5.6	5.3	5.9	6.5	6.5	8.0	5.9	5.9								
Cabbage	do	4.4	6.1	3.9	4.8	4.3	5.5	4.3	4.3								
Beans, baked	(⁵)	16.8	14.2	13.4	12.9	12.6	12.4	11.8	11.8								
Corn, canned	(⁵)	18.8	16.0	15.4	15.4	15.9	18.4	16.4	16.4								
Peas, canned	(⁵)	19.4	17.6	17.6	17.6	18.2	18.4	17.5	17.5								
Tomatoes, canned	(⁵)	15.2	12.0	13.6	13.0	13.3	13.7	11.8	11.8								
Sugar, granulated	Pound	5.6	22.9	7.5	8.1	9.6	8.2	7.0	7.0	309	34	45	71	46	25	25	
Tea	do	54.4	74.4	69.2	68.3	69.7	70.9	75.9	77.1	37	27	26	28	30	40	42	
Coffee	do	29.8	43.4	35.6	36.2	37.6	43.4	50.9	51.0	62	19	21	26	46	71	71	
Prunes	do	28.3	18.8	20.8	19.0	17.3	17.3	17.1	17.1								
Raisins	do	28.9	30.2	23.2	17.4	15.4	14.4	14.8	14.8								
Bananas	Dozen	45.9	38.6	34.2	23.8	43.5	43.4	54.5	54.5								
Oranges	do	65.9	53.5	64.8	50.9	46.1	59.8	50.7	50.7								
Weighted food index ⁶										104.8	53.3	37.5	45.1	42.9	59.0	54.2	

¹ Both pink and red.

² 15-16 ounce can.

³ 8-ounce package.

⁴ 28-ounce package.

⁵ No. 2 can.

⁶ Beginning with January, 1921, index numbers showing the trend in the retail cost of food have been composed of the articles shown in Tables 1 and 2, weighted according to the consumption of the average family. From January, 1913, to December, 1920, the index numbers included the following articles: Sirloin steak, round steak, rib roast, chuck roast, plate beef, pork chops, bacon, ham, lard, hens, flour, corn meal, eggs, butter, milk, bread, potatoes, sugar, cheese, rice, coffee, and tea.

Table 3 shows the changes in the retail prices of each of 22 articles of food for which this information has been secured since 1913, as well as the changes in the amounts of these articles that could be purchased for \$1 in specified years, 1913 to 1925, and in July and August, 1926.

TABLE 3.—AVERAGE RETAIL PRICES OF SPECIFIED ARTICLES OF FOOD AND AMOUNT PURCHASABLE FOR \$1, IN SPECIFIED YEARS, 1913 TO 1925, AND IN JULY AND AUGUST, 1926

Year	Sirloin steak		Round steak		Rib roast		Chuck roast		Plate beef		Pork chops	
	Average retail price	Amt. for \$1	Average retail price	Amt. for \$1	Average retail price	Amt. for \$1	Average retail price	Amt. for \$1	Average retail price	Amt. for \$1	Average retail price	Amt. for \$1
	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.
1913.....	25.4	3.9	22.3	4.5	19.8	5.1	16.0	6.3	12.1	8.3	21.0	4.8
1920.....	43.7	2.3	39.5	2.5	33.2	3.0	26.2	3.8	18.3	5.5	42.3	2.4
1921.....	38.8	2.6	34.4	2.9	29.1	3.4	21.2	4.7	14.3	7.0	34.9	2.9
1922.....	37.4	2.7	32.3	3.1	27.6	3.6	19.7	5.1	12.8	7.8	33.0	3.0
1923.....	39.1	2.6	33.5	3.0	28.4	3.5	20.2	5.0	12.9	7.8	30.4	3.3
1924.....	39.6	2.5	33.8	3.0	28.8	3.5	20.8	4.8	13.2	7.6	30.8	3.2
1925.....	40.6	2.5	34.7	2.9	29.6	3.4	21.6	4.6	13.8	7.2	36.6	2.7
1926:												
July.....	42.0	2.4	36.3	2.8	30.7	3.3	22.7	4.4	14.5	6.9	41.7	2.4
August.....	41.8	2.4	36.2	2.8	30.4	3.3	22.5	4.4	14.3	7.0	40.5	2.5
	Bacon		Ham		Hens		Milk		Butter		Cheese	
	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per qt.	Qts.	Cents per lb.	Lbs.	Cents per lb.	Lbs.
1913.....	27.0	3.7	26.9	3.7	21.3	4.7	8.9	11.2	38.3	2.6	22.1	4.5
1920.....	52.3	1.9	55.5	1.8	44.7	2.2	16.7	6.0	70.1	1.4	41.6	2.4
1921.....	42.7	2.3	48.8	2.0	39.7	2.5	14.6	6.8	51.7	1.9	34.0	2.9
1922.....	39.8	2.5	48.8	2.0	36.0	2.8	13.1	7.6	47.9	2.1	32.9	3.0
1923.....	39.1	2.6	45.5	2.2	35.0	2.9	13.8	7.2	55.4	1.8	36.9	2.7
1924.....	37.7	2.7	45.3	2.2	35.3	2.8	13.8	7.2	51.7	1.9	35.3	2.8
1925.....	46.7	2.1	52.6	1.9	36.6	2.7	14.0	7.1	54.8	1.8	36.7	2.7
1926:												
July.....	52.3	1.9	60.9	1.6	39.2	2.6	13.8	7.2	50.1	2.0	35.6	2.8
August.....	52.0	1.9	60.7	1.6	37.9	2.6	13.9	7.2	50.6	2.0	35.7	2.8
	Lard		Eggs		Bread		Flour		Corn meal		Rice	
	Cents per lb.	Lbs.	Cents per doz.	Dozs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.
1913.....	15.8	6.3	34.5	2.9	5.6	17.9	3.3	30.3	3.0	33.3	8.7	11.5
1920.....	29.5	3.4	68.1	1.5	11.5	8.7	8.1	12.3	6.5	15.4	17.4	5.7
1921.....	18.0	5.6	50.9	2.0	9.9	10.1	5.8	17.2	4.5	22.2	9.5	10.5
1922.....	17.0	5.9	44.4	2.3	8.7	11.5	5.1	19.6	3.9	25.6	9.5	10.5
1923.....	17.7	5.6	46.5	2.2	8.7	11.5	4.7	21.3	4.1	24.4	9.5	10.5
1924.....	19.0	5.3	47.8	2.1	8.8	11.4	4.9	20.4	4.7	21.3	10.1	9.9
1925.....	23.3	4.3	52.1	1.9	9.4	10.6	6.1	16.4	5.4	18.5	11.1	9.0
1926:												
July.....	22.9	4.4	42.1	2.4	9.4	10.6	6.0	16.7	5.1	19.6	11.7	8.5
August.....	22.7	4.4	44.9	2.2	9.4	10.6	6.0	16.7	5.1	19.6	11.6	8.6
	Potatoes		Sugar		Tea		Coffee					
	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.	Cents per lb.	Lbs.				
1913.....	1.7	58.8	5.5	18.2	54.4	1.8	29.8	3.4				
1920.....	6.3	15.9	19.4	5.2	73.3	1.4	47.0	2.1				
1921.....	3.1	32.3	8.0	12.5	69.7	1.4	36.3	2.8				
1922.....	2.8	35.7	7.3	13.7	68.1	1.5	36.1	2.8				
1923.....	2.9	34.5	10.1	9.9	69.5	1.4	37.7	2.7				
1924.....	2.7	37.0	9.2	10.9	71.5	1.4	43.3	2.3				
1925.....	3.6	27.8	7.2	13.9	75.5	1.3	51.5	1.9				
1926:												
July.....	4.1	24.4	6.9	14.5	77.0	1.3	51.1	2.0				
August.....	3.6	27.8	7.0	14.3	77.1	1.3	51.0	2.0				

Retail Prices of Food in 51

AVERAGE retail food prices are shown in Table 4 for 40 cities. For 11 other cities prices are shown for the same dates with the bureau until after 1913.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL
[Exact comparison of prices in different cities can not be made for some articles,

Article	Unit	Atlanta, Ga.				Baltimore, Md.				Birmingham, Ala.			
		Aug. 15—		July 15,	Aug. 15,	Aug. 15—		July 15,	Aug. 15,	Aug. 15—		July 15,	Aug. 15,
		1913		1925	1926	1913		1925	1926	1913		1925	1926
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak	Pound	25.0	38.0	40.0	40.3	24.3	41.6	40.4	40.2	28.1	39.3	41.0	41.0
Round steak	do	21.5	34.3	35.8	36.6	23.0	37.6	36.6	36.8	22.5	34.3	35.7	35.5
Rib roast	do	20.1	29.6	31.9	31.3	19.3	31.3	30.7	30.5	20.6	28.3	28.8	28.7
Chuck roast	do	15.5	21.2	23.8	23.4	16.0	22.4	22.1	21.9	16.8	22.7	22.8	22.6
Plate beef	do	9.4	12.7	13.9	13.4	12.6	14.4	14.9	14.7	10.5	14.3	14.5	14.2
Pork chops	do	23.5	36.0	39.2	38.8	19.3	41.7	40.5	39.0	20.0	36.2	40.0	39.1
Bacon, sliced	do	32.0	46.1	49.2	48.8	26.3	47.2	46.9	47.0	35.0	48.9	51.0	51.0
Ham, sliced	do	31.0	54.3	61.7	60.8	34.5	58.9	62.6	62.3	31.3	54.0	58.9	59.5
Lamb, leg of	do	19.4	36.4	38.6	38.3	18.3	40.3	41.3	40.1	23.3	37.3	38.6	38.6
Hens	do	20.2	31.2	37.6	35.8	24.2	39.2	41.9	41.0	17.0	32.2	36.3	37.3
Salmon, canned, red	do	32.8	38.7	37.2	37.2	29.0	36.8	36.9	36.9	32.4	41.4	40.7	40.7
Milk, fresh	Quart	10.0	16.0	20.0	18.8	8.8	13.0	13.0	13.0	10.3	19.0	20.0	20.0
Milk, evaporated	15-16 oz. can	13.5	13.5	13.5	13.5	11.3	11.2	11.3	11.3	12.5	12.6	12.6	12.6
Butter	Pound	37.1	57.0	55.5	54.6	36.7	57.6	54.8	54.9	39.0	56.6	56.5	56.1
Oleomargarine (all butter substitutes)	do	30.3	32.5	31.0	31.0	29.0	30.4	30.3	30.3	35.5	36.1	36.5	36.5
Cheese	do	25.0	35.3	34.4	33.6	22.5	36.1	33.9	33.9	23.0	37.0	35.3	35.6
Lard	do	16.1	24.2	22.9	22.7	15.0	23.3	21.7	21.5	16.5	24.6	23.8	22.8
Vegetable lard substitute	do	24.7	23.8	23.6	23.6	24.6	24.7	24.4	24.4	22.2	22.2	22.4	22.4
Eggs, strictly fresh	Dozen	28.3	46.9	40.0	41.7	27.7	43.9	38.7	40.0	28.3	46.2	42.3	42.3
Bread	Pound	6.0	10.4	10.9	11.0	5.4	9.4	9.7	9.7	5.4	10.4	10.3	10.3
Flour	do	3.5	6.9	6.9	6.7	3.2	5.7	5.8	5.8	3.6	7.1	7.0	6.9
Corn meal	do	2.6	4.7	4.0	4.1	2.5	4.6	3.9	4.0	2.4	4.5	4.2	4.1
Roll'd oats	do	9.7	9.5	9.5	9.5	8.8	8.3	8.3	8.3	9.8	9.9	9.9	9.9
Corn flakes	8-oz. pkg.	11.5	11.3	11.3	11.3	10.2	10.1	10.2	10.2	12.2	12.0	12.0	12.0
Wheat cereal	28-oz. pkg.	25.7	26.6	26.2	26.2	23.2	24.3	24.3	24.3	25.3	27.1	26.9	26.9
Macaroni	Pound	21.8	21.6	21.6	21.6	19.2	18.7	18.7	18.7	19.1	19.1	19.1	19.1
Rice	do	8.6	11.5	11.3	11.6	9.0	10.8	10.8	10.8	8.2	11.9	11.8	11.7
Beans, navy	do	12.0	10.5	10.7	10.7	9.1	7.8	7.9	7.9	12.1	10.8	10.4	10.4
Potatoes	do	2.3	6.0	5.6	5.0	1.7	4.4	3.5	4.0	2.3	6.0	6.0	5.6
Onions	do	9.3	8.2	7.7	7.7	8.6	6.6	5.3	5.3	9.0	8.3	8.0	8.0
Cabbage	do	8.3	4.9	5.5	5.5	4.8	5.1	4.6	4.6	7.3	5.6	5.7	5.7
Beans, baked	No. 2 can	12.3	11.7	11.7	11.7	11.3	10.6	10.6	10.6	12.7	12.7	12.2	12.2
Corn, canned	do	19.2	17.7	17.7	17.7	17.3	15.2	15.0	15.0	19.2	18.3	18.2	18.2
Peas, canned	do	19.1	19.2	18.8	18.8	16.3	15.6	15.6	15.6	22.4	21.9	21.4	21.4
Tomatoes, canned	do	13.5	10.8	11.0	11.0	11.5	10.1	10.1	10.1	13.0	10.8	11.0	11.0
Sugar, granulated	Pound	5.9	7.4	7.4	7.4	5.1	6.2	6.5	6.5	5.7	7.4	7.4	7.4
Tea	do	60.0	106.3	106.6	104.8	56.0	76.2	74.8	75.1	61.3	92.5	97.5	96.6
Coffee	do	32.0	50.3	51.1	51.1	24.8	48.6	47.9	47.7	28.8	53.8	53.9	54.2
Prunes	do	17.5	18.8	18.7	18.7	15.9	14.6	14.4	14.4	18.9	19.8	20.4	20.4
Raisins	do	15.3	17.9	18.4	18.4	13.1	13.5	13.4	13.4	15.6	15.5	15.2	15.2
Bananas	Dozen	23.5	23.0	26.4	26.4	25.9	25.4	25.8	25.8	36.5	37.1	37.1	37.1
Oranges	do	61.3	49.3	48.1	48.1	57.7	49.8	49.1	49.1	64.1	53.0	50.7	50.7

¹ The steak for which prices are here quoted is called "sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

Cities on Specified Dates

for August 15, 1913 and 1925, and for July 15 and August 15, 1926.
the exception of August 1913, as these cities were not scheduled by

ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES

particularly meats and vegetables, owing to difference in trade practices]

Boston, Mass.				Bridgeport, Conn.				Buffalo, N. Y.				Butte, Mont.				Charleston, S. C.			
Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15—	July 15, 1926	Aug. 15, 1926	Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926
1913	1925						1913	1925								1913	1925		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
35.8	69.0	66.0	65.4	51.8	48.2	48.3	23.8	42.3	42.1	42.4	32.0	32.5	32.3	21.8	33.2	33.5	33.5	33.5	33.5
36.2	56.2	51.5	51.1	44.3	41.7	41.9	20.5	35.8	35.4	35.5	27.7	28.8	28.8	20.0	30.5	32.0	30.5	30.5	30.5
25.0	42.9	39.6	39.0	38.5	36.7	36.4	17.0	30.4	30.3	30.8	27.2	28.3	27.6	20.0	26.8	27.5	27.7	27.7	27.7
18.0	28.9	27.9	27.5	28.5	27.1	27.4	15.5	22.8	23.4	23.3	18.0	20.2	19.5	15.8	19.1	20.5	20.7	20.7	20.7
19.6	18.5	18.7	11.9	11.5	11.7	11.5	12.9	13.5	13.4	12.1	12.5	12.8	11.9	13.4	14.9	14.1	14.1	14.1	14.1
24.2	42.8	44.4	44.0	42.9	43.5	44.6	22.0	43.4	44.9	43.3	37.7	40.2	42.7	22.5	34.5	39.9	39.2	39.2	39.2
25.8	48.1	49.9	49.7	53.3	53.9	55.1	24.5	45.9	48.4	48.4	56.0	59.2	60.0	27.5	45.6	47.4	47.1	47.1	47.1
33.8	60.5	66.3	66.2	61.3	67.3	68.3	28.0	52.5	59.8	59.7	58.2	63.8	64.2	28.3	50.6	56.9	57.5	57.5	57.5
23.0	40.7	42.5	40.7	41.1	42.1	40.4	15.5	35.5	37.6	35.5	39.1	40.0	39.0	21.3	40.0	44.3	42.9	42.9	42.9
25.6	40.2	42.5	41.4	39.4	42.3	40.4	21.8	37.3	40.5	38.5	33.8	36.8	35.5	22.2	37.0	41.8	40.1	40.1	40.1
32.3	38.0	38.0	37.4	30.4	35.5	36.2	30.6	37.8	37.6	37.6	30.8	31.9	32.5	31.8	39.6	38.8	38.8	38.8	38.8
8.9	14.8	14.9	14.9	15.0	15.0	16.0	8.0	14.2	13.0	13.0	14.3	14.3	14.3	11.7	18.0	18.0	18.0	18.0	18.0
11.8	12.2	12.2	11.3	11.6	11.6	11.6	11.4	11.2	11.3	10.9	11.2	11.2	11.2	11.8	12.0	12.0	12.0	12.0	12.0
35.9	55.0	51.1	51.5	53.3	50.7	50.3	32.9	53.5	51.8	50.0	56.1	47.3	48.3	34.2	52.5	49.3	49.3	49.3	49.3
29.5	29.3	29.5	29.1	29.8	29.6	29.6	29.4	27.8	28.0	32.5	32.5	32.5	32.5	30.9	31.4	31.0	31.0	31.0	31.0
22.4	38.8	36.6	36.9	38.5	39.3	39.7	20.0	38.1	36.6	36.7	36.8	35.5	35.5	20.5	34.1	31.7	31.6	31.6	31.6
15.7	24.2	23.1	22.6	23.5	22.5	22.4	14.5	23.0	21.9	21.7	26.5	24.9	25.4	15.3	23.7	24.0	24.1	24.1	24.1
25.8	25.2	25.2	25.6	25.9	25.9	25.9	26.4	26.1	25.9	28.2	29.2	29.3	29.3	24.3	24.8	25.3	25.3	25.3	25.3
42.4	67.2	57.5	64.2	63.6	54.6	61.4	29.8	50.1	43.0	44.4	57.3	49.7	53.6	30.0	46.8	49.0	46.3	46.3	46.3
5.9	9.1	9.1	9.1	9.0	8.8	8.8	5.6	9.0	8.9	8.9	9.7	9.8	9.8	6.0	10.8	10.6	10.4	10.4	10.4
3.8	6.6	6.5	6.4	5.9	6.2	6.2	3.0	5.6	5.6	5.7	6.1	6.0	5.8	3.7	7.4	7.3	7.2	7.2	7.2
3.5	6.5	6.5	6.5	7.8	8.0	8.0	2.6	5.5	5.4	5.4	6.4	5.9	5.9	2.4	4.1	4.0	4.1	4.1	4.1
9.4	9.2	9.3	8.8	8.5	8.6	8.6	8.9	8.6	8.6	7.8	7.3	7.2	7.2	9.3	9.4	9.5	9.5	9.5	9.5
10.9	10.7	10.8	10.3	10.5	10.5	10.5	10.4	10.2	10.2	12.4	12.3	12.2	12.2	12.1	12.0	12.0	12.0	12.0	12.0
24.4	24.6	24.5	23.7	24.6	24.6	24.6	23.8	24.7	24.6	26.9	28.4	28.4	28.4	24.8	27.0	26.4	26.4	26.4	26.4
23.3	22.7	22.3	22.9	22.7	22.7	22.7	22.2	21.5	21.6	19.7	19.2	19.4	19.4	19.2	19.0	18.7	18.7	18.7	18.7
9.2	11.9	12.7	12.0	11.0	11.7	11.5	9.3	11.2	11.6	11.4	12.0	12.3	12.3	5.5	9.1	9.8	9.8	9.8	9.8
10.9	10.1	9.8	10.9	9.9	9.5	9.5	9.9	8.7	8.9	11.7	10.6	10.4	10.4	10.9	10.0	9.8	9.8	9.8	9.8
1.9	4.9	3.9	3.6	4.7	4.1	3.4	2.0	4.4	3.6	3.7	4.1	4.1	2.9	2.3	5.4	3.3	3.8	3.8	3.8
8.2	7.8	7.1	8.6	7.6	6.8	6.8	8.4	7.7	6.8	7.5	5.4	4.8	4.8	8.0	6.8	5.6	5.6	5.6	5.6
5.8	6.8	5.4	5.6	6.2	4.2	4.2	4.1	4.9	4.4	4.6	6.6	5.4	5.4	7.1	3.7	4.9	4.9	4.9	4.9
13.6	13.2	13.1	11.9	11.3	11.3	11.3	10.2	10.0	9.8	14.9	14.5	14.5	14.5	10.1	10.0	9.8	9.8	9.8	9.8
20.6	18.9	18.7	20.4	19.4	19.8	19.8	17.8	15.8	16.1	16.7	15.9	16.0	16.0	17.8	15.0	15.0	15.0	15.0	15.0
21.2	20.5	20.5	21.6	21.2	21.4	21.4	17.1	16.1	16.4	16.8	14.5	14.6	14.6	19.0	17.8	17.8	17.8	17.8	17.8
13.5	11.9	11.9	14.6	13.2	13.3	13.3	14.7	13.3	13.7	14.6	13.7	13.8	13.8	11.7	10.1	9.8	9.8	9.8	9.8
5.6	6.7	6.7	6.8	6.5	6.5	6.6	5.5	6.7	6.6	6.7	8.9	8.2	8.3	5.1	6.5	6.4	6.6	6.6	6.6
58.6	76.3	74.9	74.0	61.1	60.3	60.3	45.0	67.8	71.2	71.7	81.3	83.8	83.3	50.0	76.4	74.0	74.4	74.4	74.4
33.0	56.1	55.5	54.9	48.1	48.6	48.6	29.3	48.3	48.8	49.0	55.8	57.1	57.0	26.3	46.1	46.1	46.1	46.1	46.1
16.8	16.5	17.1	17.7	16.0	16.2	16.2	16.7	16.3	16.2	17.1	19.3	17.6	17.6	16.5	14.9	15.2	15.2	15.2	15.2
13.9	14.0	13.6	14.1	14.1	14.5	14.5	13.7	14.4	14.4	15.3	16.1	15.9	15.9	14.8	14.2	14.4	14.4	14.4	14.4
43.3	44.5	45.0	33.6	35.5	34.5	34.5	42.0	42.1	41.4	15.1	14.8	14.8	14.8	39.2	38.3	37.9	37.9	37.9	37.9
64.9	52.4	56.0	64.1	53.7	57.9	57.9	63.7	54.1	53.4	55.0	45.8	46.3	46.3	50.0	45.0	45.6	45.6	45.6	45.6

¹ Per pound

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Chicago, Ill.				Cincinnati, Ohio				Cleveland, Ohio			
		Aug. 15—		July 15,	Aug. 15,	Aug. 15—		July 15,	Aug. 15,	Aug. 15—		July 15,	Aug. 15,
		1913	1925	1926	1926	1913	1925	1926	1926	1913	1925	1926	1926
Sirloin steak	Pound	Cts. 24.1	Cts. 46.0	Cts. 43.9	Cts. 45.7	Cts. 24.1	Cts. 38.0	Cts. 39.1	Cts. 39.2	Cts. 25.4	Cts. 40.0	Cts. 39.4	Cts. 39.7
Round steak	do	21.2	37.4	36.0	36.0	22.1	35.1	35.3	35.9	22.9	33.7	33.7	33.7
Rib roast	do	20.2	35.1	34.7	34.8	19.3	29.7	30.4	30.8	18.7	27.2	28.7	27.8
Chuck roast	do	15.7	24.3	24.6	24.6	15.2	19.4	22.1	21.6	16.9	22.2	23.0	22.7
Plate beef	do	11.4	14.3	14.5	13.7	11.0	14.9	15.3	15.3	12.0	13.2	13.6	12.7
Pork chops	do	20.9	38.6	39.7	38.0	21.7	38.5	39.9	37.9	22.1	42.5	42.5	41.1
Bacon, sliced	do	32.0	51.7	55.6	55.1	26.3	43.7	46.8	46.3	30.3	49.4	52.7	52.0
Ham, sliced	do	32.2	54.1	58.5	57.6	30.2	56.4	60.0	60.3	37.3	58.0	63.7	63.7
Lamb, leg of	do	19.9	39.4	41.5	41.0	16.5	38.2	39.2	37.7	19.6	38.3	39.4	37.4
Hens	do	19.7	36.4	39.3	37.8	23.4	36.9	39.5	35.2	21.5	38.9	40.3	39.2
Salmon, canned, red	do	34.4	39.3	39.5	39.5	30.8	36.8	37.6	37.6	32.5	39.6	39.1	39.1
Milk, fresh	Quart	8.0	14.0	14.0	14.0	8.0	12.0	12.0	14.0	8.0	13.8	13.7	13.7
Milk, evaporated	15-16 oz. can	10.9	11.0	10.9	10.9	11.0	10.8	10.9	10.9	11.1	11.2	11.1	11.1
Butter	Pound	32.7	50.1	47.1	47.8	35.5	52.7	48.8	49.1	35.7	54.1	51.5	52.4
Oleomargarine (all butter substitutes)	do	28.1	27.0	27.1	27.1	31.9	30.1	30.3	30.3	32.0	32.2	32.2	32.5
Cheese	do	25.0	40.8	40.7	40.7	21.0	36.5	35.1	35.5	23.0	36.1	35.5	35.9
Lard	do	15.1	23.7	22.3	22.0	14.3	22.9	21.1	21.1	16.6	25.0	23.7	23.7
Vegetable lard substitute	do	26.7	26.3	26.1	26.1	25.8	26.1	26.1	26.1	27.5	27.5	27.5	27.7
Eggs, strictly fresh	Dozen	27.3	47.2	42.8	44.2	24.9	41.3	35.8	38.2	33.3	50.0	41.7	47.2
Bread	Pound	6.1	9.9	9.8	9.8	4.8	9.2	9.2	9.2	5.6	8.0	8.0	8.0
Flour	do	2.9	5.5	5.6	5.5	3.3	5.9	6.3	6.1	3.2	6.0	6.1	6.1
Corn meal	do	2.8	6.5	6.1	6.0	2.7	4.6	4.0	3.9	2.8	5.6	5.2	5.4
Rolled oats	do	8.5	8.3	7.8	7.8	8.9	8.6	8.5	8.5	9.2	9.5	9.5	9.5
Corn flakes	8-oz. pkg	10.1	10.1	10.0	10.0	10.2	10.3	10.4	10.4	11.5	11.3	11.3	11.3
Wheat cereal	28-oz. pkg	24.1	24.5	24.5	24.5	23.9	24.6	24.6	24.6	24.8	25.5	25.2	25.2
Macaroni	Pound	19.7	19.2	19.2	19.2	19.9	18.2	18.4	18.4	21.6	21.6	21.9	21.9
Rice	do	9.0	11.4	11.9	11.9	8.8	11.1	11.2	11.5	8.5	11.3	11.9	12.0
Beans, navy	do	9.8	9.2	9.2	9.2	8.6	7.6	7.6	7.6	9.5	7.7	7.8	7.8
Potatoes	do	2.0	4.6	4.4	3.4	2.2	4.6	4.9	4.3	2.1	4.8	3.9	3.7
Onions	do	7.9	6.5	5.5	5.5	7.7	6.1	5.2	5.2	8.4	7.4	6.3	6.3
Cabbage	do	5.9	5.3	4.1	4.1	5.3	4.4	3.3	3.3	4.6	5.5	4.2	4.2
Beans, baked	No. 2 can	12.8	12.7	12.7	12.7	11.2	10.9	11.0	11.0	13.2	13.3	12.8	12.8
Corn, canned	do	18.4	16.4	16.5	16.5	17.0	15.5	15.4	15.4	18.7	17.4	17.1	17.1
Peas, canned	do	17.8	17.2	17.0	17.0	17.8	17.5	17.2	17.2	18.3	17.7	17.6	17.6
Tomatoes, canned	do	15.0	14.1	14.0	14.0	13.6	11.6	11.7	11.7	14.5	13.5	13.4	13.4
Sugar, granulated	Pound	5.2	6.8	6.6	6.7	5.4	6.9	7.0	7.0	5.6	7.1	7.1	7.1
Tea	do	55.0	74.5	71.4	72.2	60.0	77.3	77.7	77.5	50.0	78.9	81.3	81.1
Coffee	do	30.7	51.5	51.3	51.3	25.6	45.3	46.8	46.5	26.5	52.9	54.4	54.3
Prunes	do	18.0	18.6	18.8	18.8	17.4	18.1	18.7	18.7	18.0	17.7	17.3	17.3
Raisins	do	15.1	15.4	15.5	15.5	14.8	15.1	15.0	15.0	14.5	14.9	14.9	14.9
Bananas	Dozen	40.5	41.3	40.8	40.8	32.0	35.0	35.0	35.0	52.5	47.5	50.0	50.0
Oranges	do	64.0	52.0	52.4	52.4	55.6	46.5	42.0	42.0	64.0	50.2	52.0	52.0

¹ The steak for which prices are here quoted is called "rump" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

RETAIL PRICES OF FOOD

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CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Columbus, Ohio			Dallas, Tex.			Denver, Colo.			Detroit, Mich.			Fall River, Mass.		
Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926
			1913	1925			1913	1925			1913	1925		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
39.8	39.6	39.8	22.8	32.9	35.8	36.1	24.3	33.1	36.0	35.7	26.3	42.7	42.7	43.0
34.3	35.2	35.2	20.8	30.4	32.7	32.5	22.2	29.3	32.6	32.4	21.0	35.4	35.8	35.8
29.7	30.6	30.5	20.1	27.1	27.6	27.8	17.8	24.1	25.1	24.8	20.5	30.5	31.0	31.3
23.8	24.7	24.5	16.7	20.7	20.4	21.0	15.8	18.6	20.7	20.5	15.0	23.2	23.5	23.3
16.0	15.2	15.4	12.9	15.2	17.5	17.8	9.6	10.2	11.8	11.5	11.3	13.8	14.6	14.4
36.6	38.9	37.4	22.0	36.5	38.2	36.9	20.0	38.8	39.9	39.1	21.5	43.2	43.3	41.6
49.3	53.8	54.6	38.0	48.3	51.3	48.2	30.5	50.3	53.5	53.0	25.0	50.9	54.8	54.3
54.6	60.5	59.6	31.3	55.3	63.8	62.2	33.8	57.5	60.8	61.9	28.0	58.8	64.4	64.2
43.0	42.8	43.7	22.0	41.8	42.0	42.1	16.1	36.2	39.4	37.3	17.3	42.0	43.8	41.0
34.9	40.0	39.0	17.7	29.1	33.2	31.1	19.4	29.9	32.6	32.3	21.8	39.0	41.3	40.0
33.0	41.3	40.5	-----	36.5	41.7	40.7	-----	33.7	38.7	38.3	-----	34.7	39.8	39.3
11.0	11.0	11.0	10.0	15.0	12.0	12.0	8.4	12.0	12.0	12.0	7.9	15.0	14.0	14.0
11.4	11.3	11.3	-----	13.3	12.8	13.0	-----	11.1	10.8	10.7	-----	11.1	11.0	11.1
51.7	48.0	47.5	36.0	53.9	49.5	50.4	34.3	50.6	44.4	44.5	33.7	53.6	50.3	51.0
30.4	29.8	29.5	-----	33.2	33.8	33.6	-----	29.4	29.2	29.1	-----	29.6	28.8	28.6
36.2	35.4	35.0	20.0	36.8	35.2	34.7	26.1	39.3	37.2	36.4	20.7	37.5	36.2	36.1
22.5	21.0	20.5	16.8	25.3	25.7	25.6	16.5	24.8	23.7	23.2	16.6	24.6	23.0	22.5
26.0	26.3	26.0	-----	25.0	25.3	25.2	-----	25.3	25.4	25.1	-----	27.1	27.2	27.2
40.3	34.3	35.1	27.0	44.6	37.3	39.3	30.0	46.3	37.8	40.2	30.0	47.3	41.3	43.3
8.1	8.1	8.1	5.4	8.5	9.6	9.6	5.4	8.3	8.3	8.3	5.6	8.7	8.3	8.2
6.1	6.1	6.0	3.2	5.8	5.8	5.7	2.5	5.1	5.0	4.7	3.1	5.9	6.0	6.0
4.6	3.7	3.6	2.8	4.9	4.2	4.4	2.5	4.4	4.3	4.1	2.8	6.2	5.7	5.7
9.4	9.4	9.4	-----	10.6	10.3	10.2	-----	8.7	8.6	8.2	-----	9.6	9.4	9.4
10.9	10.8	10.8	-----	11.4	10.8	10.9	-----	11.9	11.0	11.1	-----	10.6	10.6	10.6
24.2	24.9	24.5	-----	25.9	27.3	27.1	-----	24.5	24.8	25.0	-----	24.7	25.8	25.8
22.4	21.5	21.3	-----	21.6	20.9	20.9	-----	19.2	20.6	20.4	-----	21.8	21.7	21.8
13.3	13.3	13.5	9.3	12.7	13.0	12.7	8.6	11.6	11.4	11.5	8.4	11.6	12.1	12.2
9.4	7.8	7.6	-----	12.4	10.3	10.1	-----	11.1	10.0	10.2	-----	9.2	8.1	8.2
4.3	4.7	3.8	2.7	5.6	5.7	5.3	1.8	3.8	3.7	2.9	1.9	4.0	3.6	3.5
8.5	8.1	7.0	-----	8.7	5.4	5.3	-----	8.7	6.5	5.3	-----	8.6	7.0	5.2
4.8	5.2	4.5	-----	6.7	5.6	5.4	-----	4.0	3.5	2.5	-----	5.7	4.9	4.2
13.3	12.5	12.2	-----	15.0	13.2	13.5	-----	14.2	11.9	11.9	-----	12.2	11.9	11.5
17.7	15.8	15.3	-----	20.6	17.8	18.1	-----	19.6	14.9	14.9	-----	18.7	15.8	15.9
16.4	15.0	15.2	-----	21.7	21.9	22.1	-----	17.0	15.5	15.6	-----	17.8	16.1	16.3
14.5	12.3	12.3	-----	14.3	11.7	11.7	-----	14.7	12.6	12.2	-----	14.0	11.7	11.8
7.6	7.2	7.2	5.9	7.8	7.8	7.6	5.8	7.9	7.4	7.5	5.4	6.9	7.0	7.0
85.2	90.2	89.3	66.7	103.9	106.2	103.2	52.8	67.8	69.8	69.6	43.3	73.0	73.3	73.3
51.9	51.6	51.5	36.7	59.1	60.5	60.5	29.4	51.5	51.5	51.2	29.3	51.7	51.5	51.5
18.8	17.4	17.7	-----	21.5	21.3	21.4	-----	19.2	17.9	18.4	-----	18.7	18.4	18.8
14.8	15.1	15.3	-----	16.9	16.9	16.6	-----	14.7	14.7	14.9	-----	15.5	15.6	15.7
37.0	36.7	36.7	-----	31.3	33.8	33.8	-----	10.5	11.5	11.1	-----	33.8	35.0	35.0
59.2	47.1	50.3	-----	58.2	54.8	51.6	-----	55.0	41.1	43.6	-----	63.2	50.8	53.0

* Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Houston, Tex.			Indianapolis, Ind.				Jacksonville, Fla.			
		Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926
					1913	1925			1913	1925		
Sirloin steak	Pound	Cts. 30.4	Cts. 34.0	Cts. 33.2	Cts. 25.5	Cts. 39.5	Cts. 39.5	Cts. 39.0	Cts. 26.0	Cts. 35.8	Cts. 37.1	Cts. 37.7
Round steak	do	29.2	32.8	31.5	24.7	37.5	38.1	37.7	22.0	30.7	31.9	31.3
Rib roast	do	23.1	26.3	25.8	18.2	29.1	29.6	29.4	23.3	26.3	28.8	29.5
Chuck roast	do	18.8	20.3	20.0	16.4	24.6	24.7	24.8	14.0	19.1	20.6	20.8
Plate beef	do	15.8	17.5	17.3	12.1	15.0	15.4	15.4	10.3	11.4	12.9	13.1
Pork chops	do	36.2	38.3	37.1	22.7	39.9	42.1	39.5	22.3	32.9	40.6	40.0
Bacon, sliced	do	49.1	52.2	52.2	31.0	46.5	49.3	49.5	30.3	46.5	50.0	50.0
Ham, sliced	do	52.3	57.1	56.7	31.2	56.7	63.0	62.7	28.7	53.3	58.8	59.4
Lamb, leg of	do	36.0	37.0	36.0	20.7	40.0	41.7	41.7	19.3	36.7	38.3	37.5
Hens	do	31.2	35.0	35.3	21.0	36.0	40.2	39.8	22.8	35.4	40.4	38.6
Salmon, canned, red	do	31.3	37.1	36.7		31.3	36.3	36.3		30.8	38.1	39.6
Milk, fresh	Quart	16.0	15.8	15.6	8.0	11.0	12.0	12.0	12.4	18.8	22.0	22.0
Milk, evaporated	15-16 oz can	12.0	11.5	11.5		10.6	10.8	10.8		12.1	11.6	11.9
Butter	Pound	54.1	48.9	49.1	34.5	52.9	48.6	47.4	38.6	54.8	51.8	53.2
Oleomargarine (all butter sub- stitutes).	do	30.8	30.5	29.9		30.4	30.2	30.1		30.5	30.8	31.9
Cheese	do	34.1	30.6	31.8	21.0	37.3	35.5	35.5	22.5	34.5	32.2	34.1
Lard	do	24.4	23.8	23.7	15.2	22.1	21.4	20.6	15.5	23.5	24.0	24.9
Vegetable lard substitute	do	18.9	21.2	20.6		26.9	26.7	26.7		24.6	24.8	25.4
Eggs, strictly fresh	Dozen	42.1	36.8	37.2	24.0	40.9	35.8	35.7	34.0	53.8	45.8	50.8
Bread	Pound	8.9	9.0	9.0	5.1	8.1	8.1	8.1	6.5	11.0	11.0	11.0
Flour	do	6.1	5.7	5.8	3.1	5.8	5.9	5.8	3.8	6.9	6.8	6.9
Corn meal	do	5.3	4.1	4.1	2.6	4.8	4.1	4.2	2.9	4.4	4.1	4.2
Rollod oats	do	9.3	8.9	8.9		8.3	8.1	8.1		9.9	9.3	9.5
Corn flakes	8-oz pkg	12.0	11.7	11.9		10.2	10.2	10.1		11.4	11.2	11.2
Wheat cereal	28-oz pkg	24.8	25.8	25.4		24.6	24.8	24.8		24.8	24.9	24.9
Macaroni	Pound	19.2	18.3	18.3		20.4	19.0	19.2		20.6	19.8	20.0
Rice	do	10.2	10.2	10.1	9.2	11.5	12.1	12.2	6.6	10.9	11.2	11.1
Beans, navy	do	11.3	9.6	9.5		9.1	7.5	7.7		10.5	10.5	10.3
Potatoes	do	5.6	5.3	4.9	2.2	4.4	4.6	3.7	2.6	6.2	5.9	5.2
Onions	do	7.6	5.5	5.5		8.7	7.3	5.4		8.6	7.8	7.7
Cabbage	do	6.5	4.5	4.9		5.5	4.2	3.9		8.2	5.3	6.3
Beans, baked	No. 2 can	12.6	11.3	11.3		11.8	10.1	10.6		11.3	10.8	11.4
Corn, canned	do	18.8	15.6	15.5		17.6	15.0	15.0		20.8	20.2	20.7
Peas, canned	do	17.5	14.2	14.1		16.7	15.2	15.2		20.5	18.8	19.8
Tomatoes, canned	do	13.0	9.8	10.0		14.4	11.3	11.3		12.3	10.3	10.3
Sugar, granulated	Pound	6.9	6.9	7.1	5.9	7.0	7.2	7.3	5.9	7.2	7.0	7.3
Tea	do	76.8	80.8	81.7	60.0	78.8	86.1	86.1	60.0	95.9	97.5	99.8
Coffee	do	45.1	44.8	44.9	30.0	51.5	50.9	51.1	34.5	51.6	50.3	50.2
Prunes	do	17.3	16.7	16.8		19.7	20.3	19.3		17.9	17.4	18.6
Raisins	do	15.1	14.5	14.6		16.0	16.1	15.9		15.4	16.5	16.5
Bananas	Dozen	32.3	29.5	29.5		28.6	31.4	31.8		26.7	30.0	27.0
Oranges	do	48.2	42.5	38.9		56.8	49.1	49.1		56.9	72.5	90.5

¹ The steak for which prices are here quoted is called "Sirloin" in this city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Kansas City, Mo.				Little Rock, Ark.				Los Angeles, Calif.				Louisville, Ky.				Manchester, N. H.			
Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926
1913	1925			1913	1925			1913	1925			1913	1925			1913	1925		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
24.4	39.8	40.2	40.2	26.3	33.1	35.0	33.9	24.0	30.7	36.7	36.8	23.2	33.1	35.8	36.3	37.4	58.9	58.3	57.8
22.3	34.0	35.2	34.7	20.6	30.4	31.9	31.1	21.0	30.0	30.2	30.2	20.0	29.5	31.3	31.3	30.6	47.9	45.9	45.5
18.0	27.2	27.0	27.2	20.0	25.7	27.7	27.3	19.6	28.2	30.2	29.2	18.3	24.4	27.4	26.0	20.8	29.4	28.4	28.5
15.3	20.2	20.3	20.2	16.3	20.1	21.8	21.8	15.8	19.2	20.0	20.1	15.6	18.5	19.3	19.2	17.2	23.4	23.8	23.6
12.3	12.6	13.3	13.6	13.5	15.2	15.7	16.1	12.3	13.6	14.3	13.9	13.1	14.0	15.9	15.7	-----	15.6	16.3	16.0
20.9	38.8	40.1	39.3	22.5	33.8	38.7	35.8	25.4	49.3	48.6	48.4	20.6	36.9	37.2	36.3	21.4	38.8	40.2	38.5
31.3	50.5	53.5	52.6	38.0	49.6	54.9	54.5	33.8	57.3	63.0	62.0	29.7	47.0	51.7	51.9	23.6	43.8	43.3	44.2
30.6	55.9	60.5	61.7	30.6	50.3	57.7	57.7	36.7	65.0	73.0	71.8	30.0	49.6	55.5	55.0	30.0	47.2	53.9	53.7
18.7	36.0	35.8	35.7	20.0	41.4	38.1	40.0	18.8	36.3	38.0	37.8	17.1	35.0	40.0	40.6	21.0	38.8	40.4	40.0
16.9	30.8	34.1	32.8	18.3	27.8	30.2	29.0	26.8	41.1	44.6	44.6	22.9	36.0	39.6	37.0	24.4	41.7	45.4	44.2
-----	35.1	39.2	39.7	-----	32.6	41.4	40.1	-----	30.5	36.1	36.0	-----	29.6	38.9	39.0	-----	34.6	39.1	38.8
9.1	13.0	13.0	13.0	10.0	15.3	15.0	15.0	10.0	15.0	15.0	15.0	8.8	12.0	12.0	12.0	8.0	14.0	14.0	14.0
-----	11.9	11.7	11.7	-----	12.4	11.9	12.1	-----	10.1	10.0	10.0	-----	11.8	11.9	11.9	-----	12.9	12.7	12.8
35.4	52.8	48.6	48.6	39.0	54.3	49.7	49.1	39.5	58.2	50.2	51.9	36.4	54.2	49.5	50.3	37.6	55.6	51.9	51.6
-----	27.2	27.5	27.9	-----	29.5	31.1	30.7	-----	31.3	31.4	31.5	-----	30.8	32.2	32.8	-----	27.5	26.0	26.3
21.8	36.6	35.0	35.0	23.3	37.9	34.8	33.9	19.5	38.4	38.7	38.9	21.7	36.6	36.1	36.4	21.0	38.2	36.5	36.0
16.4	24.3	23.5	22.9	16.3	24.1	24.5	23.9	17.9	24.4	24.9	24.3	16.1	23.6	21.7	22.1	16.2	23.5	22.1	21.8
25.3	26.9	27.3	27.9	-----	23.8	24.4	24.3	-----	25.5	26.1	26.1	-----	27.8	29.0	29.2	-----	26.4	25.6	25.6
6.0	40.4	37.0	37.5	28.3	44.8	37.9	40.6	39.0	50.5	45.6	48.1	25.0	41.0	36.0	36.1	35.6	59.6	54.1	55.8
-----	9.7	10.0	10.0	6.0	8.8	9.5	9.5	6.0	9.3	8.6	8.6	5.7	9.3	9.4	9.3	6.1	8.4	8.7	8.7
3.0	5.9	5.8	5.7	3.5	6.6	6.5	6.3	3.6	5.9	5.6	5.5	3.4	6.6	6.4	6.2	3.4	6.2	6.3	6.2
2.7	5.6	4.9	5.0	2.5	4.5	4.1	4.1	3.3	5.8	5.3	5.3	2.3	4.4	3.8	3.6	3.6	5.5	5.4	5.3
-----	9.3	9.1	9.2	-----	10.1	10.6	10.6	-----	9.8	9.7	9.8	-----	8.5	8.5	8.3	-----	8.7	9.0	9.0
-----	12.5	12.0	11.9	-----	12.3	11.9	12.1	-----	10.1	10.1	10.1	-----	10.5	10.8	10.6	-----	11.2	11.2	11.1
-----	25.1	27.0	26.9	-----	24.8	25.4	25.4	-----	23.8	24.9	25.0	-----	24.6	24.2	24.8	-----	24.6	25.7	25.8
-----	21.5	20.6	20.3	-----	20.8	20.4	20.7	-----	17.5	18.4	18.2	-----	18.4	19.1	19.1	-----	24.1	23.9	23.9
8.7	10.8	11.3	11.5	8.3	10.4	10.0	9.9	7.7	11.5	11.2	11.2	8.1	11.1	11.3	11.2	8.8	10.9	11.1	11.0
-----	10.1	9.2	9.3	-----	10.2	9.6	9.7	-----	10.7	9.2	9.2	-----	9.5	7.7	7.7	-----	9.9	9.0	9.0
1.9	3.4	3.5	2.4	2.0	5.1	5.0	4.7	1.8	4.1	3.6	3.6	1.9	4.2	4.6	3.2	1.9	4.4	3.6	3.4
-----	7.6	6.5	5.9	-----	9.2	6.9	6.7	-----	7.0	5.4	5.1	-----	7.9	6.7	5.6	-----	7.7	7.1	6.0
-----	6.0	3.7	3.1	-----	6.5	5.8	4.9	-----	3.8	4.5	4.3	-----	5.7	5.4	4.7	-----	4.0	7.2	4.6
-----	13.7	12.8	12.8	-----	12.0	11.6	11.0	-----	11.7	11.4	11.4	-----	11.1	10.7	10.7	-----	14.3	13.9	14.0
-----	17.8	14.6	14.8	-----	20.2	16.6	16.6	-----	17.8	16.2	16.4	-----	19.3	16.0	16.5	-----	19.0	17.2	17.4
-----	16.7	15.4	15.2	-----	19.1	17.8	17.8	-----	18.6	17.3	17.5	-----	17.7	16.3	15.7	-----	20.2	19.1	19.3
-----	14.2	12.3	12.9	-----	13.7	10.6	10.1	-----	15.8	15.3	15.3	-----	12.7	9.9	10.3	-----	14.4	11.7	11.8
5.7	7.4	7.2	7.3	5.8	7.8	7.6	7.7	5.6	6.8	6.7	6.8	5.5	7.1	7.2	7.2	5.6	6.9	7.0	7.1
54.0	79.5	85.3	86.1	50.0	102.6	108.1	105.9	54.5	76.8	75.1	75.3	62.5	77.0	82.6	82.6	47.0	61.5	64.3	62.9
27.8	53.3	54.2	54.1	30.8	54.8	54.9	54.9	36.3	52.4	54.5	53.8	27.5	51.3	49.7	50.0	32.0	52.6	52.6	52.3
-----	17.4	18.1	18.4	-----	20.4	18.5	19.1	-----	15.7	16.2	16.7	-----	17.5	18.2	18.2	-----	16.1	16.1	15.9
-----	15.7	15.5	15.1	-----	16.9	15.5	15.5	-----	12.2	13.4	13.4	-----	15.1	15.9	15.9	-----	14.3	14.3	14.3
-----	10.5	11.0	10.5	-----	7.4	9.3	9.4	-----	9.2	9.7	9.9	-----	33.3	37.5	33.8	-----	7.7	9.5	9.5
54.1	46.6	47.9	-----	58.6	51.5	49.6	-----	53.6	48.8	40.8	-----	61.7	46.3	46.5	-----	59.3	48.2	53.9	-----

* No. 2½ can.

* Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Memphis, Tenn.				Milwaukee, Wis.				Minneapolis, Minn.			
		Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926
		1913	1925			1913	1925			1913	1925		
		Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
Sirloin steak	Pound	22.9	35.7	35.8	36.3	22.6	39.7	39.1	39.2	24.2	32.8	33.6	33.7
Round steak	do	19.1	32.3	34.0	34.0	21.2	35.0	34.8	35.0	21.7	29.7	30.5	31.0
Rib roast	do	21.5	26.8	27.1	26.9	18.8	27.7	28.4	28.5	21.0	25.2	25.9	26.2
Chuck roast	do	15.6	20.2	19.3	19.5	16.4	23.8	24.2	24.3	17.0	19.3	20.3	21.3
Plate beef	do	11.9	14.6	15.3	15.2	12.0	14.0	14.4	14.3	10.3	10.6	12.5	12.6
Pork chops	do	20.0	33.5	37.2	35.7	20.2	41.0	41.5	37.9	20.0	38.3	38.5	36.6
Bacon, sliced	do	32.1	44.5	45.3	44.9	28.6	48.3	52.3	51.5	27.7	50.8	54.3	53.2
Ham, sliced	do	30.7	50.8	59.6	60.4	29.0	50.9	57.7	57.3	32.7	54.0	60.3	60.7
Lamb, leg of	do	20.1	38.3	41.9	40.0	20.5	39.4	41.9	39.2	14.4	35.6	36.4	35.9
Hens	do	20.0	30.8	31.9	31.0	19.8	33.3	35.8	33.8	18.5	32.6	33.1	32.1
Salmon, canned, red	do		32.6	34.7	35.6		31.2	33.8	34.6		33.5	38.9	38.8
Milk, fresh	Quart	10.0	15.3	15.0	15.0	7.0	10.0	11.0	11.0	7.0	11.0	11.0	11.0
Milk, evaporated	15-16 oz can		11.9	11.2	11.4		11.3	11.2	11.0		11.9	11.6	11.5
Butter	Pound	37.0	51.3	49.3	49.5	32.2	49.4	46.2	46.9	31.4	47.9	46.3	46.8
Oleomargarine (all butter substitutes)	do		25.6	27.3	26.6		29.3	27.3	27.5		27.6	28.2	28.3
Cheese	do	20.8	33.9	32.1	32.3	21.3	34.5	33.0	33.2	30.8	36.8	32.9	32.8
Lard	do	16.5	22.7	21.0	20.2	16.3	24.4	23.0	22.4	15.6	22.7	21.8	21.3
Vegetable lard substitute	do		24.4	23.6	23.8		26.9	26.6	26.6		27.5	27.3	27.3
Eggs, strictly fresh	Dozen	29.3	43.5	39.0	39.1	26.2	41.4	35.2	37.2	25.3	39.4	35.4	35.8
Bread	Pound	6.0	9.6	9.7	9.7	5.6	9.0	9.0	9.0	5.6	10.1	9.8	9.3
Flour	do	3.4	6.8	6.6	6.6	3.1	5.4	5.6	5.5	3.0	5.7	5.8	5.7
Corn meal	do	2.2	4.1	3.8	3.9	3.3	5.5	5.5	5.5	2.4	5.6	5.6	5.5
Rollod oats	do		9.5	9.4	9.4		8.6	8.6	8.6		8.3	8.4	8.2
Corn flakes	8-oz pkg		11.1	11.1	11.1		10.5	10.3	10.4		10.8	10.7	10.7
Wheat cereal	28-oz pkg		24.2	25.7	25.6		24.2	24.5	24.4		24.6	25.3	25.3
Macaroni	Pound		19.5	19.3	19.6		18.5	18.0	17.9		18.8	19.3	19.8
Rice	do	7.5	10.2	10.7	10.7	9.0	11.3	11.9	11.9	9.1	11.4	12.1	11.1
Beans, navy	do		9.6	9.6	9.5		9.4	8.2	8.2		9.7	9.1	9.1
Potatoes	do	2.1	4.7	4.9	4.4	1.5	2.9	3.8	3.0	1.0	2.6	3.3	2.2
Onions	do		6.3	5.6	5.6		7.8	7.0	5.7		8.6	7.3	6.1
Cabbage	do		5.5	5.0	4.3		3.3	5.8	4.7		5.0	5.1	3.8
Beans, baked	No. 2 can		12.1	11.8	12.0		11.4	11.1	11.1		13.2	12.1	12.3
Corn, canned	do		17.6	16.0	16.1		18.5	15.6	15.5		17.0	15.4	15.4
Peas, canned	do		18.5	17.7	17.5		16.9	16.6	16.4		16.1	15.1	15.4
Tomatoes, canned	do		12.7	10.8	10.8		15.0	13.3	13.3		15.0	13.4	13.5
Sugar, granulated	Pound	5.7	7.0	7.0	7.1	5.5	6.8	6.6	6.7	5.8	6.9	7.3	7.2
Tea	do	63.8	96.4	96.7	96.7	50.0	71.8	71.2	70.8	45.0	62.1	60.5	60.6
Coffee	do	27.5	50.3	51.3	51.3	27.5	47.6	47.3	46.9	30.8	54.2	53.8	53.9
Prunes	do		16.7	17.6	17.3		17.6	17.1	17.0		17.4	16.9	17.3
Raisins	do		14.7	15.4	15.2		14.6	14.8	14.9		14.1	15.1	15.1
Bananas	Dozen		31.7	30.0	28.8		27.9	29.6	29.3		210.6	210.9	210.7
Oranges	do		64.5	45.8	50.1		57.1	49.2	48.2		58.2	47.9	48.8

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Mobile, Ala.			Newark, N. J.			New Haven, Conn.			New Orleans, La.			New York, N. Y.		
Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926
			1913	1925			1913	1925			1913	1925		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
32.9	34.5	34.1	29.2	48.8	46.6	46.4	32.8	56.1	54.0	53.3	21.9	34.2	36.0	35.2
32.1	33.6	33.6	28.4	45.5	43.6	43.7	30.4	45.6	43.9	43.9	18.9	29.9	30.8	30.6
26.7	28.2	28.2	21.2	36.7	35.5	35.2	24.2	36.9	35.5	35.8	19.4	28.9	30.0	29.8
20.8	22.5	22.1	18.8	25.8	24.5	23.9	20.0	27.7	26.6	26.6	14.5	20.1	21.2	20.9
16.0	17.3	16.6	12.0	13.0	12.8	12.5	14.6	15.8	15.5	11.0	16.0	16.4	16.4	14.9
37.5	41.4	41.4	24.2	41.5	41.8	41.2	23.4	41.5	41.0	40.8	23.8	37.6	39.6	38.5
46.1	51.9	51.5	26.4	47.2	49.4	49.0	20.3	49.4	53.2	52.7	33.1	46.6	51.1	50.6
50.8	57.9	57.1	22.2	55.2	59.6	57.5	34.0	59.5	65.4	65.0	31.3	51.7	57.5	54.3
39.4	40.0	38.3	20.0	38.5	40.6	38.4	19.2	41.6	42.4	41.5	21.3	38.7	39.4	38.7
35.0	38.2	37.5	24.0	37.7	40.6	37.4	24.0	41.9	43.8	43.1	21.7	34.7	37.4	37.3
30.5	41.0	41.1	28.5	37.1	36.9	36.9	30.6	34.3	34.9	34.9	37.2	39.0	40.3	40.3
17.8	17.8	17.8	9.0	15.0	15.0	15.0	9.0	15.0	15.0	16.0	9.3	12.3	14.0	14.0
11.9	11.7	11.7	11.1	11.2	11.2	11.2	12.0	11.9	11.9	11.9	11.1	11.0	11.1	11.1
56.2	54.4	53.8	35.8	54.3	51.2	51.4	34.0	52.6	50.5	50.5	34.0	53.3	50.4	51.1
30.7	31.6	30.8	30.9	30.6	30.5	30.5	32.0	31.6	31.4	31.4	31.2	30.5	30.5	30.5
35.8	35.1	35.4	24.3	39.5	39.8	39.8	22.0	38.1	37.7	37.7	22.0	35.8	33.8	35.1
23.8	22.6	22.3	16.5	24.0	22.5	22.6	15.8	24.0	23.3	22.7	15.4	22.6	22.0	22.2
21.6	22.6	22.0	26.3	25.8	25.7	25.7	25.5	25.6	26.5	26.5	22.8	23.1	22.4	22.4
45.6	40.7	44.9	42.2	59.8	50.8	54.0	42.6	63.6	54.4	62.1	30.4	46.0	40.9	42.3
9.5	9.6	9.6	5.6	9.1	9.3	9.3	6.0	8.9	9.2	9.2	5.1	8.9	8.9	8.8
6.8	6.6	6.6	3.7	6.1	6.2	6.2	3.3	6.0	6.1	6.1	3.7	7.4	7.4	7.2
4.5	3.9	3.9	3.6	6.3	6.6	6.6	3.2	6.7	6.9	7.1	2.8	4.6	4.0	3.9
8.8	8.7	8.7	8.3	8.5	8.4	8.4	9.4	9.4	9.4	9.4	9.2	9.0	9.0	9.0
11.2	11.3	11.3	10.0	9.9	9.9	9.9	11.1	10.9	10.7	10.7	10.6	10.4	10.3	10.3
24.3	25.5	25.5	23.6	24.1	24.3	24.3	23.9	24.6	24.7	24.7	24.1	24.7	24.6	24.6
20.8	21.1	20.9	21.1	21.1	21.1	21.1	22.9	22.3	22.2	22.2	9.8	9.6	10.0	10.0
10.6	11.6	11.5	9.0	10.3	11.3	11.3	9.3	11.9	11.8	11.9	7.4	9.9	10.2	10.1
10.4	8.8	8.9	10.5	9.8	9.6	9.6	9.9	9.7	9.5	9.5	9.6	8.5	8.4	8.4
5.5	5.1	5.0	2.6	4.6	3.8	3.3	2.1	4.3	3.9	3.3	2.2	5.0	4.2	4.1
7.8	5.5	5.7	8.3	7.0	6.6	6.6	8.6	7.8	7.0	7.0	6.5	3.8	3.9	3.9
6.0	5.3	4.7	6.0	5.3	4.3	4.3	5.1	6.2	4.9	4.9	5.8	4.5	4.9	4.9
11.1	10.7	10.8	11.5	10.7	10.6	10.6	11.6	11.4	11.6	11.6	12.0	10.9	10.9	10.9
18.4	17.3	17.5	18.4	16.4	16.6	16.6	19.4	18.5	18.8	18.8	18.8	14.1	14.8	14.8
17.1	16.4	16.9	18.2	17.4	17.4	17.4	21.0	19.6	19.3	19.3	17.4	17.2	17.7	17.7
12.9	11.1	10.3	12.2	10.9	10.9	10.9	14.0	12.9	12.5	12.5	13.4	10.0	9.9	9.9
7.1	7.1	7.1	5.3	6.6	6.3	6.3	5.4	6.6	6.7	6.6	5.3	6.2	6.2	6.3
82.5	80.5	80.3	53.8	62.1	63.5	63.5	55.0	58.5	60.1	60.1	62.1	83.6	82.2	81.3
50.2	50.3	50.3	29.3	49.4	50.3	50.2	33.8	52.5	52.9	52.9	26.4	37.0	36.1	36.6
18.3	17.8	18.1	16.1	15.8	15.8	15.8	17.8	16.3	16.8	16.8	18.5	17.8	17.9	17.9
14.9	14.6	14.3	13.6	14.3	14.6	14.6	14.1	13.9	14.0	14.0	14.2	14.1	14.3	14.3
22.9	23.0	21.5	37.8	36.9	38.1	38.1	37.1	34.8	34.4	34.4	17.9	15.0	15.8	15.8
50.7	49.1	45.9	37.2	53.2	54.5	54.5	62.7	51.7	52.9	52.9	55.0	48.3	43.1	43.1

1 Whole. 2 Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Norfolk, Va.			Omaha, Nebr.				Peoria, Ill.		
		Aug.	July	Aug.	Aug. 15—		July	Aug.	Aug.	July	Aug.
		15, 1925	15, 1926	15, 1926	1913	1925	1926	1926	1925	1926	1926
Sirloin steak	Pound	41.3	40.9	41.0	25.4	39.9	38.2	37.9	35.0	35.2	34.8
Round steak	do	34.1	34.6	35.2	22.8	36.9	35.5	35.4	33.5	34.2	34.1
Rib roast	do	32.0	32.2	32.4	19.0	27.0	26.6	26.3	24.1	25.3	25.2
Chuck roast	do	23.1	22.7	23.3	16.2	22.8	21.8	22.0	20.5	21.1	21.1
Plate beef	do	16.6	15.8	15.2	11.8	11.8	12.6	12.3	13.0	14.0	14.0
Pork chops	do	34.4	39.8	39.1	20.4	39.1	39.4	37.6	36.6	36.7	36.3
Bacon, sliced	do	47.8	49.0	49.7	28.6	53.2	55.9	55.8	50.6	53.0	53.0
Ham, sliced	do	45.7	52.1	53.8	30.0	57.4	61.8	62.4	53.4	58.8	58.2
Lamb, leg of	do	39.6	40.3	41.0	18.0	38.5	37.9	37.9	37.3	38.1	37.9
Hens	do	35.1	39.8	39.5	16.4	30.7	33.8	32.2	32.5	35.9	34.7
Salmon, canned, red	do	31.4	38.3	38.4		35.0	39.2	38.9	33.5	39.5	39.3
Milk, fresh	Quart	17.0	17.5	17.5	8.2	12.1	10.8	11.3	12.0	11.7	11.7
Milk, evaporated	15-16 oz. can	11.4	11.1	11.1		11.6	11.8	11.7	11.7	11.5	11.5
Butter	Pound	54.5	53.4	53.4	33.0	49.9	46.9	46.5	49.3	46.8	46.2
Oleomargarine (all butter substitutes)	do	28.9	29.5	27.8		29.4	29.6	29.9	30.8	29.9	29.4
Cheese	do	33.9	32.4	32.2	22.9	36.2	34.2	33.9	35.9	34.9	35.0
Lard	do	22.6	21.6	21.6	17.8	25.6	24.6	24.6	23.9	22.7	23.0
Vegetable lard substitute	do	22.5	22.7	23.3		28.4	27.6	27.9	27.3	27.3	27.0
Eggs, strictly fresh	Dozen	47.2	41.6	43.0	23.3	40.2	34.7	35.7	38.9	33.8	35.2
Bread	Pound	9.4	9.9	9.9	5.2	9.9	10.2	10.2	10.0	10.1	10.1
Flour	do	6.1	6.1	6.0	2.7	5.3	5.2	5.0	6.0	6.0	5.9
Corn meal	do	4.8	4.4	4.4	2.4	5.2	4.9	4.9	5.1	4.8	4.8
Roiled oats	do	8.6	8.4	8.3		10.5	10.3	10.3	9.4	9.0	9.0
Corn flakes	8-oz. pkg	10.6	10.2	10.3		12.4	12.4	12.4	12.1	11.8	11.9
Wheat cereal	28-oz. pkg	24.0	23.9	24.2		24.6	28.3	28.0	25.6	25.4	25.4
Macaroni	Pound	19.5	19.1	19.1		21.6	21.1	20.9	20.7	20.2	20.5
Rice	do	11.6	11.8	11.8	8.5	10.1	11.5	11.5	11.1	11.9	11.8
Beans, navy	do	9.9	8.1	8.1		10.2	9.7	9.8	9.3	8.8	8.5
Potatoes	do	4.7	3.9	3.7	1.7	3.7	3.8	3.0	3.6	4.0	3.1
Onions	do	8.0	7.1	6.9		8.0	7.9	6.7	8.6	8.0	6.1
Cabbage	do	6.2	5.0	4.7		6.6	4.1	3.9	5.5	4.4	3.5
Beans, baked	No. 2 can	10.1	9.9	10.0		14.6	13.6	13.7	12.0	11.8	11.3
Corn, canned	do	17.8	15.8	15.4		17.8	16.1	16.0	16.9	15.6	15.6
Peas, canned	do	21.3	19.5	21.2		16.9	16.1	16.0	19.3	18.3	18.0
Tomatoes, canned	do	11.6	10.1	10.1		15.3	13.4	13.5	15.6	13.8	13.7
Sugar, granulated	Pound	6.3	6.6	6.6	6.1	7.2	7.2	7.3	7.8	7.6	7.5
Tea	do	93.3	88.7	89.1	56.0	76.8	78.8	78.8	62.8	67.6	67.9
Coffee	do	51.0	50.0	50.0	30.0	57.3	57.6	57.5	51.0	51.8	51.9
Prunes	do	15.9	16.5	17.0		17.8	17.9	17.4	18.9	20.4	19.6
Raisins	do	14.0	14.5	14.4		16.3	15.8	15.7	15.1	15.4	15.5
Bananas	Dozen	33.3	34.2	33.5		29.8	21.5	21.5	29.5	20.1	29.8
Oranges	do	59.9	53.2	51.5		48.9	45.3	46.3	53.2	46.5	45.9

¹ The steak for which prices are here quoted is called "sirloin" in the city, but in most of the other cities included in this report it would be known as "porterhouse" steak.

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Philadelphia, Pa.				Pittsburgh, Pa.				Portland, Me.				Portland, Oreg.				Providence, R. I.			
Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15, 1925	Aug. 15—	July 15, 1926	Aug. 15, 1926	Aug. 15—	July 15, 1926	Aug. 15, 1926	July 15, 1926	Aug. 15, 1926
1913	1925			1913	1925							1913	1925			1913	1925		
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
132.3	156.1	156.1	55.8	28.0	47.5	48.5	47.6	63.5	63.0	62.8	23.9	28.8	29.5	29.6	40.2	73.7	72.7	72.0	
27.5	44.8	42.7	42.9	24.8	39.2	39.6	39.2	48.5	47.7	47.7	21.4	25.6	26.9	26.9	31.6	51.9	50.3	49.9	
22.5	37.2	37.5	36.9	22.5	34.4	34.6	33.9	31.3	30.7	30.9	19.9	24.6	25.1	24.8	24.2	41.2	38.3	38.1	
18.4	24.3	25.4	26.0	17.3	24.5	24.6	24.5	21.6	21.8	21.6	16.4	16.5	18.1	18.3	18.8	30.0	28.6	28.5	
12.3	11.7	12.6	12.7	12.3	12.1	12.3	11.7	16.9	16.7	16.7	13.6	12.0	12.9	12.9	20.3	18.0	17.8		
22.4	46.3	46.7	45.8	23.5	43.4	43.4	41.9	39.9	41.3	40.9	24.4	39.6	42.8	42.7	21.6	45.3	45.1	45.8	
28.2	47.4	49.8	50.0	30.1	51.1	56.1	56.0	44.6	46.7	46.6	31.5	55.3	59.2	59.7	23.4	47.4	46.9	46.9	
32.6	60.5	65.8	64.2	31.6	61.4	68.9	67.4	56.5	63.0	63.9	31.2	55.6	59.4	60.6	33.3	59.9	64.4	65.3	
20.2	40.2	43.2	42.0	19.7	40.7	42.9	40.9	39.6	41.6	41.1	17.2	34.6	36.3	35.2	18.7	42.3	43.8	42.6	
23.1	39.7	42.8	41.2	26.0	42.5	43.9	42.3	41.4	43.8	42.4	20.7	32.2	35.4	33.9	24.8	41.5	44.4	42.9	
8.0	30.8	37.6	37.6	29.8	38.4	38.9	33.9	39.1	39.1	39.1	9.3	32.1	36.7	37.1	31.4	31.4	38.1	38.4	
	12.0	12.0	12.0	8.6	14.0	13.0	14.0	13.5	13.5	13.5	9.3	11.7	12.0	12.0	9.0	14.7	14.8	14.8	
	11.5	11.5	11.5	11.4	11.5	11.5	12.5	12.4	12.3		10.4	10.3	10.4		12.0	12.2	12.2		
39.4	55.9	53.7	54.2	35.6	53.7	51.8	51.3	57.4	52.7	52.8	39.5	59.4	47.0	51.1	36.0	53.3	51.3	51.4	
	31.8	30.3	29.6	31.5	30.3	30.4	29.2	29.4	29.6		29.5	30.4	30.1		29.7	29.4	29.3		
25.0	38.7	38.5	39.3	24.5	39.5	37.9	37.9	37.8	37.9	37.8	20.8	37.3	37.5	37.6	21.7	36.2	36.2	36.1	
15.6	24.0	23.0	22.9	15.8	23.4	22.7	22.8	24.1	22.3	21.9	18.6	25.2	24.3	24.6	15.7	23.6	22.3	22.0	
	25.7	25.7		26.2	27.4	27.5	25.6	24.9	25.2		28.7	28.7	28.8		27.6	27.3	27.0		
34.3	49.4	44.6	45.8	28.9	49.5	42.9	45.6	61.0	49.4	56.3	33.8	42.5	37.1	41.8	38.4	64.3	53.7	62.9	
4.8	9.3	9.5	9.4	5.4	9.2	9.3	9.3	10.1	10.1	10.1	5.6	9.6	9.4	9.4	5.9	9.2	9.2	9.2	
3.2	5.9	6.0	6.1	3.2	5.8	5.8	5.8	6.1	6.0	5.9	2.9	5.6	5.2	5.2	3.5	6.5	6.5	6.3	
2.7	5.2	4.8	4.8	2.8	5.3	5.8	5.8	5.4	5.2	5.1	3.3	5.7	5.1	5.1	2.8	5.2	5.1	5.1	
	8.7	8.6	8.6		9.2	9.3	9.2	7.5	8.3	8.0		10.3	10.2	10.1		9.3	9.4	9.2	
	10.0	10.0	10.0		10.6	10.6	10.5	11.5	11.6	11.4		11.3	11.3	11.2		10.8	10.8	10.9	
	24.0	24.4	24.4		25.2	25.1	25.3	25.0	25.9	25.9		26.3	26.6	26.7		24.1	25.1	25.3	
	21.4	20.8	20.9		23.3	23.5	23.4	24.8	24.9	25.6		18.0	17.8	17.6		24.0	23.2	23.5	
9.8	12.2	12.5	12.5	9.2	11.9	12.7	13.0	12.3	12.9	12.9	8.6	11.3	11.3	11.3	9.3	11.1	12.0	12.0	
	10.2	8.9	8.7		9.4	8.1	8.1	10.4	9.6	9.6		11.3	9.9	9.9		10.3	9.4	9.3	
2.1	4.9	4.1	3.9	1.9	4.4	3.6	3.5	4.4	3.5	3.4	1.3	3.2	3.0	2.6	2.0	4.3	3.9	3.3	
	8.3	6.8	5.6		8.1	7.6	6.9	7.6	7.5	6.0		5.9	4.6	3.8		7.2	7.2	5.4	
	7.0	5.5	4.1		5.5	5.7	5.2	5.0	6.3	4.6		4.3	4.0	4.9		5.2	4.7	3.8	
	11.0	10.6	10.6		12.8	12.9	12.9	15.2	15.3	15.0		14.6	13.4	13.2		11.9	11.3	11.3	
	16.9	14.7	14.6		17.9	16.6	16.8	18.0	16.1	16.2		21.1	19.1	19.0		18.8	17.5	17.8	
	15.6	14.8	15.0		18.2	17.0	17.2	19.9	18.6	18.6		19.6	19.3	18.3		20.0	19.3	19.4	
	12.3	11.0	11.2		13.7	11.6	11.6	24.3	20.1	20.2		17.1	16.9	16.7		14.8	13.8	13.6	
5.0	6.1	6.5	6.6	5.7	7.0	7.1	7.1	6.7	6.9	6.9	6.4	7.1	7.1	7.1	5.2	6.6	6.7	6.7	
54.0	69.9	73.2	74.3	58.0	81.3	84.8	85.3	61.1	62.6	61.6	55.0	76.6	76.6	75.8	48.3	60.8	61.5	61.2	
24.5	45.0	45.6	45.0	30.0	51.5	50.9	50.3	54.4	53.6	54.1	35.0	51.7	52.7	52.8	30.0	54.2	54.2	54.3	
	14.7	14.8	14.8		19.3	18.5	17.0	16.0	15.7	15.6		12.3	14.4	14.4		17.8	16.4	16.5	
	13.3	30.6	13.8		14.3	14.6	14.6	13.3	13.6	13.7		13.4	14.0	13.9		13.9	14.2	14.4	
	31.6	48.3	30.3		36.7	39.4	40.6	9.6	10.8	10.8		13.4	13.5	11.9		31.9	33.7	32.5	
	62.2	13.8	52.2		58.2	51.0	52.4	71.0	55.3	53.7		54.9	45.9	45.9		70.4	56.3	56.9	

* No. 3 can.

* No. 2½ can.

* Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTI

Article	Unit	Richmond, Va.				Rochester, N. Y.			St. Louis, Mo.			
		Aug. 15—		July 15,	Aug. 15,	Aug. 15,	July 15,	Aug. 15,	Aug. 15—		July 15,	Aug. 15,
				1926	1926	1925	1926	1926			1926	1926
		1913	1925						1913	1925		
Sirloin steak.....	Pound.....	Cts. 22.6	Cts. 39.4	Cts. 39.8	Cts. 39.4	Cts. 44.1	Cts. 42.4	Cts. 42.1	Cts. 25.6	Cts. 38.9	Cts. 37.6	Cts. 37.6
Round steak.....	do.....	20.0	34.1	35.1	35.1	35.7	35.2	35.4	24.7	36.1	36.0	36.4
Rib roast.....	do.....	19.3	30.4	31.8	31.9	31.2	30.1	30.5	19.0	30.3	30.4	29.9
Chuck roast.....	do.....	15.9	22.6	23.7	23.2	25.3	24.8	24.8	15.3	21.6	20.8	20.8
Plate beef.....	do.....	12.9	15.4	16.5	16.3	13.4	13.1	12.8	11.5	13.4	13.8	13.8
Pork chops.....	do.....	21.2	39.7	42.3	40.3	43.4	45.5	44.5	20.8	37.1	37.7	36.3
Bacon, sliced.....	do.....	27.0	46.7	48.3	48.2	45.4	47.3	46.9	28.0	46.8	48.9	48.2
Ham, sliced.....	do.....	26.0	44.6	49.6	48.8	54.6	61.1	60.7	28.3	53.5	58.3	59.0
Lamb, leg of.....	do.....	19.3	44.7	46.0	46.3	38.6	40.4	39.1	19.0	37.8	38.4	38.2
Hens.....	do.....	19.4	32.8	39.8	37.6	40.0	44.1	42.4	17.4	33.4	36.8	36.6
Salmon, canned, red.....	do.....		32.7	36.6	36.8	31.7	38.3	37.3		34.0	39.2	39.1
Milk, fresh.....	Quart.....	10.0	14.0	14.0	14.0	13.5	12.5	12.5	8.0	13.0	13.0	13.0
Milk, evaporated.....	15-16 oz. can.....		12.5	12.6	12.4	11.4	11.5	11.6		10.6	10.4	10.4
Butter.....	Pound.....	38.6	58.4	55.5	56.1	53.3	49.7	50.0	33.8	54.2	50.3	51.0
Oleomargarine (all butter substitutes). Cheese.....	do.....		29.9	31.9	31.9	31.3	31.0	30.8		27.2	28.0	27.6
Lard.....	do.....	21.8	36.6	35.6	35.7	38.5	3.44	35.0	19.2	34.9	32.9	32.8
Vegetable lard substitute.....	do.....	15.3	23.2	22.2	22.0	23.2	21.4	21.2	14.5	20.5	19.7	18.9
Eggs, strictly fresh.....	Dozen.....		26.1	25.8	26.2	24.5	24.9	24.9		26.3	26.1	26.0
Bread.....	Pound.....	26.6	44.8	39.6	40.4	48.1	40.1	42.7	23.0	40.0	35.8	37.8
Flour.....	do.....	5.3	9.4	9.5	9.5	8.9	8.9	8.9	5.5	9.5	9.8	9.8
Corn meal.....	do.....	3.3	6.0	6.0	6.0	6.0	5.8	5.8	3.0	5.7	5.6	5.5
Rolled oats.....	do.....	2.1	5.1	4.7	4.6	6.4	5.7	5.6	2.2	4.8	4.3	4.4
Corn flakes.....	8-oz. pkg.....		9.3	9.1	9.0	9.5	9.4	9.2		8.8	8.8	8.8
Wheat cereal.....	28-oz. pkg.....		11.1	11.2	11.2	10.7	10.3	10.3		10.2	10.1	10.1
Macaroni.....	Pound.....		25.0	25.8	25.5	24.3	25.3	25.4		23.8	24.3	24.3
Rice.....	do.....		21.1	20.2	20.2	22.2	21.8	21.5		21.5	21.1	21.1
Beans, navy.....	do.....	10.0	12.7	13.3	13.1	11.4	10.4	10.5	8.4	10.5	10.6	10.7
Potatoes.....	do.....		10.5	9.1	9.0	10.0	9.0	9.1		9.1	7.7	7.7
Onions.....	do.....	1.8	5.2	4.7	4.2	4.3	3.6	3.6	1.9	4.2	4.3	3.2
Cabbage.....	do.....		8.9	7.5	7.5	8.8	7.0	5.9		7.5	5.7	5.1
Beans, baked.....	No. 2 can.....		7.8	4.3	4.3	4.8	5.8	3.4		5.5	3.6	3.5
Corn, canned.....	do.....		10.8	10.1	10.1	11.0	10.5	10.5		11.2	10.6	10.6
Peas, canned.....	do.....		16.6	15.5	15.5	17.6	16.3	16.1		17.1	15.8	15.9
Tomatoes, canned.....	do.....		20.7	20.4	20.4	19.0	18.4	18.4		16.9	16.5	16.7
Sugar, granulated.....	Pound.....		12.3	10.1	10.1	14.1	13.8	13.8		13.4	11.5	11.4
Tea.....	do.....	5.1	6.6	6.8	6.9	6.2	6.4	6.4	5.4	7.0	7.0	7.1
Coffee.....	do.....	56.0	87.7	90.6	91.9	66.6	67.6	67.3	55.0	70.2	73.6	73.9
Prunes.....	do.....	26.8	49.6	49.4	49.4	49.7	47.1	47.9	24.4	49.0	48.1	48.1
Raisins.....	do.....		18.5	18.5	18.5	18.8	16.4	16.4		19.4	19.0	18.6
Bananas.....	Dozen.....		14.1	14.6	14.7	14.0	13.9	14.3		14.4	14.9	14.8
Oranges.....	do.....		36.3	37.3	36.8	38.2	38.0	37.0		31.4	33.2	32.3
	do.....		68.8	55.8	56.8	64.0	49.7	49.0		51.8	47.5	48.0

CLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

St. Paul, Minn.				Salt Lake City, Utah				San Francisco, Calif.				Savannah, Ga.				Scranton, Pa.			
Aug. 15—		July 15, 1926		Aug. 15—		July 15, 1926		Aug. 15—		July 15, 1926		Aug. 15, 1926		July 15, 1926		Aug. 15—		July 15, 1926	
1913	1925	1913	1925	1913	1925	1913	1925	1913	1925	1913	1925	1913	1925	1913	1925	1913	1925	1913	1925
Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.	Cts.
26.6	36.4	36.9	37.1	23.1	29.0	30.8	30.8	20.7	31.9	31.6	31.7	31.3	35.0	35.0	26.8	54.4	51.4	51.0	
22.9	31.8	31.5	32.3	20.0	26.3	27.7	27.3	19.3	28.9	29.0	28.9	25.4	28.5	28.5	23.3	45.5	42.0	42.4	
20.6	29.8	29.2	30.1	20.0	22.4	23.7	23.6	21.0	30.9	29.6	29.2	25.0	27.5	28.1	23.8	38.7	37.5	36.6	
17.0	22.9	23.8	23.3	15.4	17.4	18.4	17.9	15.0	19.5	18.4	18.4	15.7	18.8	19.1	18.0	29.4	28.1	27.5	
10.6	12.6	13.4	13.4	12.3	11.5	12.3	12.4	13.3	15.3	14.5	14.2	13.4	15.5	15.0	12.5	11.6	11.9	11.6	
19.7	37.2	39.3	36.8	23.0	39.9	40.6	39.7	23.7	44.5	46.6	46.8	30.0	38.0	36.5	22.3	44.8	46.2	45.1	
27.2	47.3	52.9	51.8	32.0	50.0	53.3	53.7	34.7	61.5	65.3	65.7	45.2	47.3	47.5	28.0	52.4	54.3	54.3	
28.3	52.1	57.1	57.6	30.8	52.8	6.10	61.0	32.0	63.3	70.0	70.3	44.6	50.0	50.0	31.7	61.0	64.5	65.5	
17.9	33.8	35.3	34.3	18.5	33.9	35.9	34.6	16.5	38.3	38.4	37.8	41.0	40.0	41.0	20.0	47.2	47.1	46.1	
19.4	32.1	32.8	31.6	25.0	29.9	33.3	32.8	23.8	42.0	45.1	45.3	33.9	33.4	34.5	23.3	44.4	46.6	45.5	
	34.6	37.8	38.7		33.4	34.9	36.4		29.3	36.3	36.2	30.7	39.6	39.1		31.4	37.3	37.3	
6.9	11.0	11.0	11.0	8.7	11.5	10.3	11.0	10.0	14.0	14.0	14.0	17.5	17.0	17.0	8.6	12.0	12.0	12.0	
	11.9	12.0	11.8		10.5	10.6	10.6		10.2	10.1	10.1	11.1	11.3	11.3		11.9	11.9	11.8	
32.8	47.1	45.6	46.6	40.0	56.9	45.7	46.6	40.7	63.2	50.5	53.0	56.0	53.5	53.8	35.2	53.4	50.2	50.7	
	28.8	27.9	28.1		29.3	29.6	30.1		29.9	31.3	31.5	34.8	34.8	34.8			29.4	29.4	
21.0	33.4	32.9	34.1	23.3	3.11	29.4	29.4	19.0	39.0	37.9	38.0	34.9	34.3	34.5	18.0	35.2	35.2	35.4	
15.0	23.4	22.4	22.1	19.3	26.1	25.3	25.2	18.0	25.6	24.8	25.4	22.0	23.0	22.1	16.2	24.3	23.1	22.6	
	27.9	27.3	27.1		29.6	29.5	29.8		28.6	28.2	28.3	19.6	21.2	20.5		26.8	26.3	26.2	
24.3	39.3	35.7	35.8	32.9	43.9	34.1	37.3	38.2	50.2	43.6	47.2	49.5	43.3	46.7	30.1	53.2	44.4	46.1	
5.9	10.2	10.2	9.8	5.9	10.8	9.9	9.9	5.9	9.9	9.8	9.8	10.2	10.5	10.5	5.6	10.2	10.4	10.4	
3.0	6.0	6.0	5.8	2.6	5.1	4.7	4.5	3.4	6.3	5.9	5.8	7.1	7.0	6.8	3.5	6.3	6.5	6.4	
2.4	5.7	5.3	5.3	3.3	5.6	5.5	5.5	3.4	5.9	6.3	6.3	4.1	3.6	3.6		7.6	7.5	7.5	
	9.7	9.9	10.0		8.9	8.9	8.9		9.8	9.5	9.5	9.2	8.6	8.9		10.2	10.0	10.0	
	12.2	11.9	11.9		12.1	12.3	12.3		10.6	10.8	10.5	10.4	10.1	10.1		11.0	11.0	10.9	
	25.0	26.6	26.8		24.9	25.5	25.5		24.5	25.4	25.5	23.7	24.5	24.5		26.2	25.8	25.8	
	18.9	18.7	18.7		20.0	20.4	20.4		14.4	15.8	15.6	18.1	18.1	18.3		23.3	23.5	23.4	
10.0	10.9	12.2	12.0	8.2	12.1	11.4	11.2	8.5	11.4	12.1	12.0	10.1	10.7	10.7	8.4	10.8	11.7	11.7	
	9.8	9.3	9.4		10.9	9.6	9.8		10.6	9.6	9.6	11.2	10.4	10.4		12.5	11.3	11.1	
1.0	2.6	3.5	2.6	1.2	3.1	2.4	2.2	1.7	3.8	3.7	3.6	5.3	5.1	4.8	2.0	4.6	3.9	3.3	
	7.8	7.8	6.9		7.3	7.5	4.9		5.2	4.1	3.9	8.2	7.5	6.9		8.7	7.6	6.6	
	5.0	4.1	2.9		3.6	3.7	3.2					6.6	5.5	4.8		4.4	6.6	3.8	
	13.9	13.8	13.7		14.5	13.9	13.6		14.2	13.7	13.4	12.4	12.5	12.5		11.5	11.0	11.0	
	16.4	15.2	15.1		17.5	15.5	15.3		18.8	18.6	18.5	19.4	16.3	15.0		18.6	17.4	17.2	
	16.6	16.1	16.1		16.5	15.9	16.1		18.9	18.5	18.5	17.8	16.7	16.4		19.4	17.4	17.7	
	14.6	14.1	14.4		16.5	14.3	14.5		15.9 ¹	15.5 ¹	15.3	11.4	10.1	9.9		13.9	11.9	12.0	
5.6	7.3	7.4	7.5	6.1	8.0	7.7	7.8	5.5	6.9	6.8	6.8	6.7	6.7	6.8	5.7	6.8	6.7	6.8	
45.0	72.4	69.9	69.9	65.7	84.4	88.3	88.3	50.0	67.8	68.8	68.8	77.6	81.6	82.1	52.5	66.4	65.5	66.8	
30.0	51.6	52.8	53.1	35.8	56.9	57.1	56.8	32.0	51.2	54.3	54.0	48.4	48.7	48.9	31.3	52.8	52.4	52.4	
	17.5	17.3	17.7		15.0	15.3	15.1		14.4	15.4	15.1	15.7	16.2	15.9		17.3	18.3	17.8	
	14.9	15.7	15.7		13.1	14.6	14.7		12.8	13.3	13.1	13.9	14.9	15.1		14.2	15.1	15.0	
10.0 ²	11.4	11.6			14.3 ²	14.8 ²	14.5		32.8	31.7	30.6	31.4	32.3	31.5		35.4	33.7	34.0	
59.0	49.9	50.6			49.9	42.8	41.4		55.8	48.3	49.0	66.9	49.3	51.7		67.8	52.4	53.7	

¹ No. 2½ can.² Per pound.

TABLE 4.—AVERAGE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN 51 CITIES ON SPECIFIED DATES—Continued

Article	Unit	Seattle, Wash.				Springfield, Ill.			Washington, D. C.			
		Aug. 15—		July 15, 1926	Aug. 15, 1926	Aug. 15, 1925	July 15, 1926	Aug. 15, 1926	Aug. 15—		July 15, 1926	Aug. 15, 1926
		1913	1925						1913	1925		
Sirloin steak	Pound	Cts. 24.4	Cts. 33.2	Cts. 34.1	Cts. 33.4	Cts. 34.4	Cts. 36.1	Cts. 36.1	Cts. 27.8	Cts. 43.3	Cts. 47.8	Cts. 46.9
Round steak	do.	21.5	28.7	30.3	29.5	34.2	35.6	35.4	24.5	41.0	40.9	40.5
Rib roast	do.	20.0	26.0	27.4	27.0	23.6	23.7	23.9	21.6	34.3	35.1	35.0
Chuck roast	do.	16.2	17.3	19.4	19.7	20.7	21.9	22.1	17.3	25.0	24.7	24.3
Plate beef	do.	12.7	14.0	14.5	14.5	13.3	13.6	13.3	12.1	13.0	13.3	13.4
Pork chops	do.	24.2	40.5	45.9	43.5	37.1	37.1	36.3	23.0	45.8	45.2	44.8
Bacon, sliced	do.	34.2	57.0	62.4	62.0	47.6	50.7	50.7	28.4	51.5	53.1	53.1
Ham, sliced	do.	31.7	58.8	65.7	65.0	54.1	59.6	59.3	31.0	59.5	62.5	61.5
Lamb, leg of	do.	19.4	34.7	37.4	36.5	39.6	41.8	41.0	19.4	40.8	44.8	42.3
Hens	do.	23.8	34.0	34.7	34.0	34.1	35.7	35.4	21.9	40.8	44.4	41.8
Salmon, canned, red	do.		33.8	38.5	38.2	33.6	41.4	41.7		30.0	38.3	38.4
Milk, fresh	Quart	8.5	12.0	13.0	13.0	12.5	12.5	12.5	8.0	14.0	14.0	14.0
Milk, evaporated	15-16 oz can		10.6	10.6	10.6	11.8	11.7	11.7		11.7	12.0	12.0
Butter	Pound	39.0	58.0	49.6	51.4	51.4	48.4	48.9	36.6	55.4	53.5	53.2
Oleomargarine (all butter substitutes).	do.		29.8	30.7	30.8	31.7	30.4	30.2		30.1	31.5	31.5
Cheese	do.	21.7	34.8	35.7	35.5	36.6	35.4	35.4	23.8	38.8	38.5	37.7
Lard	do.	17.4	24.7	24.2	24.4	24.1	22.8	22.5	15.3	23.7	23.3	23.1
Vegetable lard substitute.	do.		29.0	27.8	28.1	28.5	28.0	27.7		25.2	25.5	25.8
Eggs, strictly fresh	Dozen	39.0	45.6	38.0	43.3	40.2	33.9	35.4	30.0	50.4	44.3	45.9
Bread	Pound	5.5	10.1	9.7	9.6	10.3	10.1	10.1	5.7	8.0	8.2	8.8
Flour	do.	2.9	5.5	5.1	5.1	6.2	6.0	6.1	3.8	6.5	6.7	6.7
Corn meal	do.	3.2	5.5	5.0	4.9	5.6	5.1	5.0	2.5	5.5	5.1	5.2
Rollod oats	do.		9.0	9.0	8.7	10.3	10.0	10.0		9.4	9.2	9.2
Corn flakes	8-oz. pkg.		12.0	11.9	11.9	12.0	11.6	11.6		10.7	10.6	10.7
Wheat cereal	28-oz. pkg.		26.0	27.4	27.5	25.9	27.0	26.8		24.3	24.9	24.9
Macaroni	Pound		18.2	18.3	18.3	20.1	19.1	19.4		23.4	23.8	23.8
Rice	do.	7.7	12.8	13.0	12.7	11.0	11.3	11.3	9.8	11.8	13.1	13.1
Beans, navy	do.		11.2	10.0	10.1	9.7	8.7	8.6		9.6	8.7	8.4
Potatoes	do.	1.6	3.4	3.2	2.8	4.0	4.5	3.3	2.0	4.8	4.0	3.9
Onions	do.		6.3	4.7	4.1	8.3	7.2	5.8		8.7	7.4	6.4
Cabbage	do.		3.8	4.4	4.4	6.8	5.5	3.7		6.0	5.5	5.1
Beans, baked	No. 2 can		14.4	13.3	13.3	11.7	10.9	10.9		10.8	10.6	10.6
Corn, canned	do.		19.8	19.0	18.8	20.0	15.6	15.6		17.6	15.4	15.8
Peas, canned	do.		21.4	20.1	20.0	18.6	17.3	17.1		18.1	16.7	16.9
Tomatoes, canned	do.		18.4	17.5	17.5	15.4	13.7	13.8		12.0	10.3	10.3
Sugar, granulated	Pound	6.3	7.6	7.1	7.1	7.6	7.5	7.6	5.2	6.8	6.8	6.8
Tea	do.	50.0	79.8	78.3	79.0	77.7	79.6	80.7	57.5	88.3	90.4	91.1
Coffee	do.	28.0	51.5	52.2	52.1	52.6	53.1	53.4	28.8	47.5	48.8	47.9
Prunes	do.		15.0	15.8	15.7	18.2	17.4	17.8		18.1	18.3	17.9
Raisins	do.		14.5	15.0	14.8	14.8	15.4	15.3		14.0	14.9	14.8
Bananas	Dozen		12.1	13.6	13.2	8.2	9.6	9.8		33.3	34.9	35.6
Oranges	do.		61.6	46.0	48.0	57.3	49.9	55.3		63.9	52.9	57.9

¹ No. 2½ can.² Per pound.

Comparison of Retail Food Costs in 51 Cities

TABLE 5 shows for 39 cities the percentage of increase or decrease in the retail cost of food² in August, 1926, compared with the average cost in the year 1913, in August, 1925, and in July, 1926. For 12 other cities comparisons are given for the one-year and the one-month periods. These cities have been scheduled by the bureau at different dates since 1913. The percentage changes are based on actual retail prices secured each month from retail dealers and on the average family consumption of these articles in each city.³

TABLE 5.—PERCENTAGE CHANGE IN THE RETAIL COST OF FOOD IN AUGUST, 1926, COMPARED WITH THE COST IN JULY, 1926, AUGUST, 1925, AND WITH THE AVERAGE COST IN THE YEAR 1913, BY CITIES

City	Percent- age increase, August, 1926, com- pared with 1913	Percentage de- crease, August, 1926, compared with—		City	Percent- age increase, August, 1926, com- pared with 1913	Percentage de- crease, August, 1926, compared with—	
		August, 1925	July, 1926			August, 1925	July, 1926
Atlanta.....	62.4	¹ 0.1	1.5	Minneapolis.....	50.9	3.0	3.8
Baltimore.....	63.4	2.4	¹ 0.3	Mobile.....	-----	0.8	0.2
Birmingham.....	66.5	0.8	0.9	Newark.....	47.1	4.1	1.0
Boston.....	58.1	3.9	0.1	New Haven.....	56.3	1.3	¹ 0.6
Bridgeport.....	-----	2.6	¹ 0.4	New Orleans.....	52.9	2.7	0.4
Buffalo.....	60.5	3.7	0.3	New York.....	57.2	3.6	0.9
Butte.....	-----	4.0	1.6	Norfolk.....	-----	0.6	0.6
Charleston, S. C.....	60.4	2.3	0.2	Omaha.....	52.2	4.0	1.8
Chicago.....	63.8	4.3	2.4	Peoria.....	-----	2.7	2.6
Cincinnati.....	59.7	0.2	0.0	Philadelphia.....	57.6	2.8	0.8
Cleveland.....	56.0	3.1	0.2	Pittsburgh.....	56.8	2.2	¹ 0.4
Columbus.....	-----	2.7	2.5	Portland, Me.....	-----	3.1	¹ 0.3
Dallas.....	52.4	2.2	0.8	Portland, Oreg.....	38.5	2.8	¹ 0.9
Denver.....	39.4	4.8	1.7	Providence.....	58.2	2.9	0.2
Detroit.....	64.1	4.3	0.7	Richmond.....	64.8	2.3	1.1
Fall River.....	52.6	2.8	0.7	Rochester.....	-----	4.7	0.3
Houston.....	-----	3.4	0.8	St. Louis.....	56.0	3.6	2.5
Indianapolis.....	51.4	2.7	2.9	St. Paul.....	-----	1.2	2.7
Jacksonville.....	60.5	¹ 2.2	¹ 1.0	Salt Lake City.....	32.0	6.8	¹ 0.3
Kansas City.....	50.6	3.1	2.6	San Francisco.....	51.5	3.2	¹ 0.8
Little Rock.....	49.7	1.6	1.2	Savannah.....	-----	¹ 0.4	0.3
Los Angeles.....	44.0	3.2	¹ 0.3	Scranton.....	58.9	4.5	1.5
Louisville.....	49.7	3.3	2.8	Seattle.....	45.7	2.4	0.0
Manchester.....	53.7	2.5	1.0	Springfield, Ill.....	-----	3.3	2.6
Memphis.....	50.1	2.3	0.8	Washington, D. C.....	65.2	1.4	¹ 0.1
Milwaukee.....	56.8	0.5	2.5				

¹ Increase.

Effort has been made by the bureau each month to have all schedules for each city included in the average prices. For the month of August 97.9 per cent of all the firms supplying retail prices in the 51 cities sent in a report promptly. The following-named 35 cities had a perfect record; that is, every merchant who is cooperating with the bureau sent in his report in time for his prices to be included in the city averages: Atlanta, Baltimore, Boston, Bridgeport, Buffalo, Butte, Charleston, S. C., Chicago, Cincinnati, Columbus, Dallas, Detroit, Fall River, Houston, Indianapolis, Jacksonville, Kansas

² For list of articles see note 6, p. 182.

³ The consumption figures used from January, 1913, to December, 1920, for each article in each city were given in the November, 1918, issue, pp. 94 and 95. The consumption figures which have been used for each month beginning with January, 1921, were given in the March, 1921, issue, p. 26.

City, Little Rock, Louisville, Memphis, Milwaukee, Minneapolis, Mobile, New Haven, New York, Omaha, Peoria, Pittsburgh, Portland, Me., Providence, Richmond, Rochester, St. Louis, St. Paul, and Savannah.

The following summary shows the promptness with which the merchants responded in August, 1926.

RETAIL PRICE REPORTS RECEIVED DURING AUGUST, 1926

Item	United States	Geographical division				
		North Atlantic	South Atlantic	North Central	South Central	Western
Percentage of reports received.....	97.9	98.2	98.8	99.4	98.8	93.7
Number of cities in each section from which every report was received.....	35	10	6	12	6	1

Index Numbers of Retail Prices of Food in the United States

IN TABLE 6 index numbers are given which show the changes in the retail prices of specified food articles, by years, from 1907 to 1925,⁴ and by months for 1925, and for January, through August, 1926. These index numbers, or relative prices, are based on the year 1913 as 100 and are computed by dividing the average price of each commodity for each month and each year by the average price of that commodity for 1913. These figures must be used with caution. For example, the relative price of rib roast for the year 1923 was 143.4, which means that the average money price for the year 1923 was 43.4 per cent higher than the average money price for the year 1913. The relative price of rib roast for the year 1922 was 139.4, which figures show an increase of 4 points, but an increase of slightly less than 3 per cent in the year.

In the last column of Table 6 are given index numbers showing changes in the retail cost of all articles of food combined. Since January, 1921, these index numbers have been computed from the average prices of the articles of food shown in Tables 1 and 2, weighted according to the average family consumption in 1918. (See March, 1921, issue, p. 25.) Although previous to January, 1921, the number of food articles has varied, these index numbers have been so computed as to be strictly comparable for the entire period. The index numbers based on the average for the year 1913 as 100.0 are 157.0 for July and 155.7 for August, 1926.

The curve shown in the chart on page 200 pictures more readily to the eye the changes in the cost of the food budget than do the index numbers given in the table. The chart has been drawn on the logarithmic scale, because the percentages of increase or decrease are more accurately shown than on the arithmetic scale.

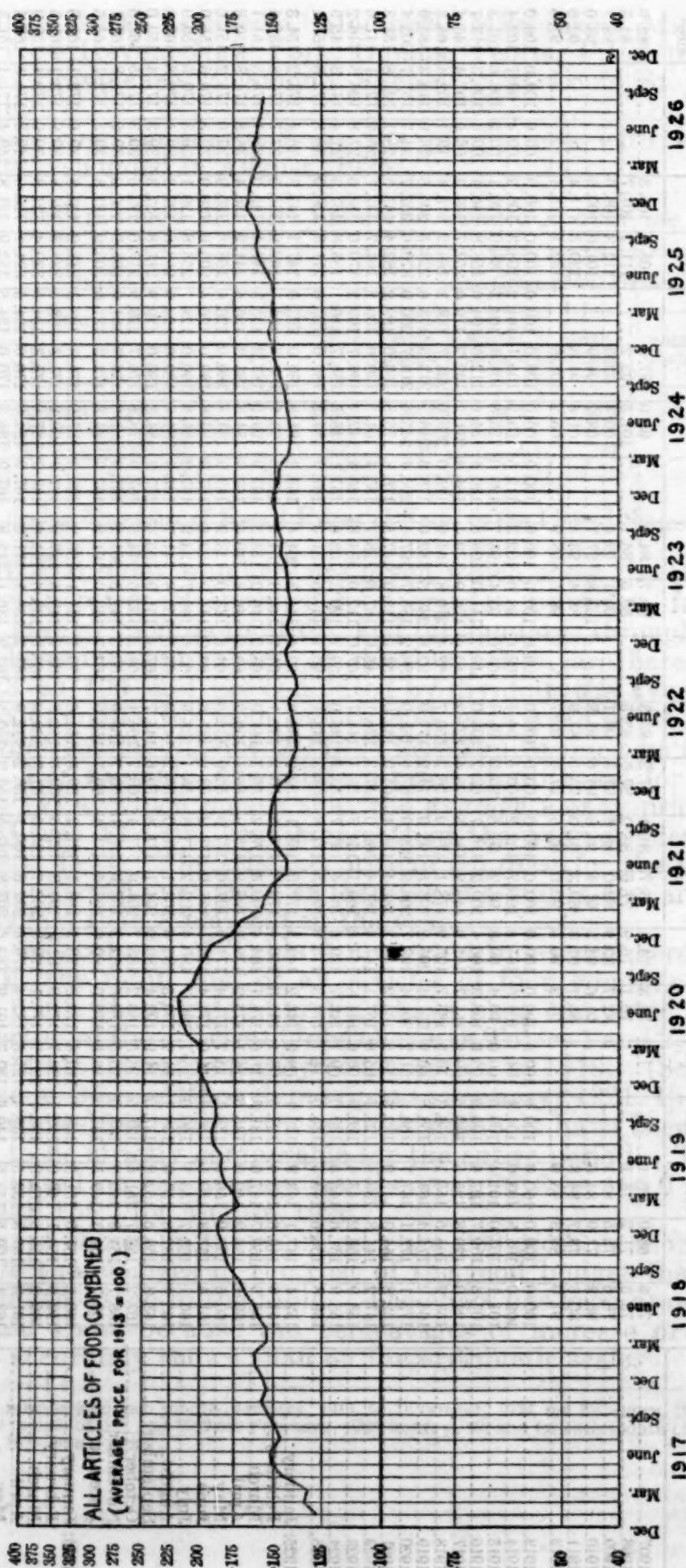
⁴ For index numbers of each month, January, 1913, to December, 1920, see February, 1921, issue, pp. 19-21; for each month of 1921 and 1922 see February, 1923, issue, p. 60; and for each month of 1923 and 1924 see February, 1925, issue, p. 21.

TABLE 6.—INDEX NUMBERS SHOWING CHANGES IN THE RETAIL PRICES OF THE PRINCIPAL ARTICLES OF FOOD IN THE UNITED STATES, BY YEARS, 1907 TO 1925, AND BY MONTHS FOR 1925 AND JANUARY THROUGH AUGUST, 1926
[Average for year 1913=100.0]

Year and month	Sirloin steak	Round steak	Rib roast	Chuck roast	Plate beef chops	Pork chops	Barcon	Ham	Hens	Milk	Butter	Cheese	Lard	Eggs	Bread	Flour	Corn meal	Rice	Potatoes	Sugar	Tea	Coffee	All articles ¹
1907	71.5	68.0	76.1	74.3	74.3	74.4	75.7	81.4	87.2	85.3	80.7	84.1	80.7	84.1	80.7	84.1	80.7	84.1	80.7	84.1	80.7	84.1	80.7
1908	73.3	71.2	78.1	76.1	76.1	76.9	77.6	83.0	89.6	85.5	80.5	86.1	80.5	86.1	80.5	86.1	80.5	86.1	80.5	86.1	80.5	86.1	80.5
1909	76.6	73.5	81.3	82.7	82.7	82.9	82.0	88.5	91.3	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1	90.1
1910	80.3	77.9	84.6	91.6	91.6	94.5	91.4	93.6	94.3	93.8	103.8	97.7	103.8	97.7	103.8	97.7	103.8	97.7	103.8	97.7	103.8	97.7	103.8
1911	80.6	78.7	84.8	85.1	85.1	91.3	86.3	91.0	95.5	97.9	88.4	93.5	88.4	93.5	88.4	93.5	88.4	93.5	88.4	93.5	88.4	93.5	88.4
1912	91.0	89.3	93.6	91.2	91.2	90.5	90.6	93.5	97.4	97.7	93.5	98.9	93.5	98.9	93.5	98.9	93.5	98.9	93.5	98.9	93.5	98.9	93.5
1913	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
1914	102.0	105.8	103.0	104.4	104.4	104.6	101.8	101.7	102.2	100.5	94.4	103.6	98.6	102.3	112.5	103.9	105.1	101.2	108.3	108.2	100.4	99.7	102.4
1915	101.1	103.0	101.4	100.6	100.6	96.4	99.8	97.2	97.5	99.2	93.4	105.0	93.4	98.7	125.0	125.8	104.3	88.9	120.1	100.2	100.6	101.3	101.3
1916	107.5	109.7	107.4	106.9	106.9	106.3	106.4	103.2	103.0	103.0	116.7	116.7	111.0	108.8	130.4	134.6	104.6	158.8	146.4	100.4	100.3	113.7	113.7
1917	124.0	129.8	125.5	130.6	129.8	151.7	151.9	142.2	124.5	125.4	127.2	150.4	174.9	139.4	164.3	211.2	192.2	252.7	169.3	106.9	101.4	146.4	146.4
1918	153.2	165.5	155.1	166.3	170.2	185.7	195.9	178.1	177.0	156.2	150.7	162.4	210.8	164.9	175.0	203.0	226.7	148.3	188.2	176.4	119.1	102.4	168.3
1919	164.2	174.4	164.1	168.8	166.9	201.4	205.2	198.5	174.2	177.0	192.8	233.5	182.0	178.6	178.6	218.2	213.3	173.6	223.5	205.5	128.9	145.3	185.9
1920	172.1	177.1	167.7	163.8	151.2	201.4	193.7	206.3	187.6	183.0	188.2	186.7	197.4	177.0	178.6	205.4	245.5	213.7	200.0	370.6	352.7	134.7	157.7
1921	152.8	154.3	147.0	132.5	118.2	166.2	158.2	181.4	169.0	147.2	126.1	148.9	107.6	128.7	155.4	154.5	130.0	164.7	132.7	125.2	121.1	121.8	153.3
1922	147.2	144.8	139.4	123.1	105.8	157.1	147.4	181.4	169.0	147.2	126.1	148.9	107.6	128.7	155.4	154.5	130.0	164.7	132.7	125.2	121.1	121.8	153.3
1923	153.9	150.2	143.4	126.3	106.6	144.8	144.8	169.1	164.3	155.1	144.7	167.0	112.0	134.8	155.4	142.4	136.7	109.2	170.6	183.6	127.8	126.5	146.2
1924	155.9	151.6	145.5	130.0	109.1	146.7	139.6	168.4	165.7	155.1	135.0	159.7	120.3	138.6	157.1	148.5	156.7	116.1	158.8	167.3	131.4	145.3	145.9
1925	159.8	155.6	149.5	135.0	114.1	174.3	173.0	195.5	171.8	137.3	143.1	166.1	147.5	151.0	167.9	184.8	180.0	127.6	211.8	130.9	138.8	172.8	157.4
1925: January	152.4	147.1	143.9	128.1	109.9	146.2	149.3	177.0	168.1	156.2	136.6	162.4	144.3	204.4	164.3	181.8	180.0	123.0	147.1	147.3	136.4	173.2	154.3
February	151.6	146.6	143.4	127.5	109.1	144.3	150.4	178.8	169.5	156.2	132.1	164.7	144.3	154.8	169.6	183.9	183.3	124.1	152.9	140.0	137.5	174.8	151.4
March	159.9	150.7	147.0	131.3	111.6	178.1	164.4	190.3	173.2	155.1	144.9	165.2	146.2	113.3	167.9	193.9	183.3	125.3	147.1	140.0	138.1	175.5	151.1
April	159.1	155.2	150.0	135.0	114.1	175.2	172.6	198.9	177.9	155.1	139.2	165.2	146.8	110.4	167.9	184.8	183.3	126.4	141.2	136.4	138.8	174.8	150.8
May	160.6	157.0	150.5	138.1	115.7	171.4	171.9	197.0	177.9	153.9	135.5	164.3	143.0	113.9	167.9	184.8	180.0	126.4	158.8	130.9	139.0	175.2	151.6
June	161.4	157.8	150.5	136.3	114.0	172.4	174.1	197.0	173.2	153.9	137.6	165.2	144.9	122.6	167.9	184.8	180.0	126.4	205.9	130.9	139.0	170.5	155.0
July	166.1	163.7	153.5	140.0	115.7	186.7	180.4	202.2	171.8	155.1	138.9	166.5	148.7	133.9	167.9	184.8	180.0	128.7	258.8	129.1	139.3	170.5	159.9
August	165.4	162.3	153.0	138.1	114.9	190.5	182.6	204.1	170.0	156.2	141.3	166.5	153.8	141.7	167.9	184.8	180.0	129.9	258.8	127.3	139.5	170.8	160.4
September	163.8	159.6	152.0	137.5	114.9	192.4	183.0	204.1	171.8	159.6	145.7	167.4	151.9	150.4	167.9	184.8	180.0	129.9	211.8	127.3	139.3	171.4	159.0
October	162.2	158.7	151.5	137.5	116.5	186.2	183.7	201.9	171.4	160.7	155.1	168.3	152.5	174.8	167.9	184.8	180.0	129.9	217.6	123.6	139.3	171.4	159.0
November	158.7	154.3	149.0	135.0	116.5	178.6	182.2	198.9	168.1	160.7	155.9	169.2	147.5	201.2	167.9	184.8	180.0	131.0	305.9	120.0	139.2	171.8	161.6
December	158.7	154.3	149.5	135.6	116.5	170.0	180.0	197.4	171.4	160.7	153.0	169.7	143.0	191.9	167.9	184.8	180.0	131.0	305.9	121.8	139.3	172.1	165.5
1926: January	160.6	157.0	151.5	138.1	119.8	173.8	178.5	198.1	181.2	159.6	144.6	170.1	141.1	156.2	167.9	187.9	173.3	133.3	341.2	121.8	139.9	172.1	164.3
February	159.8	156.1	148.0	138.1	120.7	172.9	181.1	199.3	182.6	159.6	142.3	169.7	140.5	127.0	167.9	190.9	173.3	133.3	335.3	121.8	139.9	172.1	161.5
March	160.2	156.5	151.0	138.1	120.7	177.1	179.3	200.7	185.0	157.3	139.9	168.3	138.6	111.6	167.9	187.9	173.3	133.3	329.4	121.8	139.9	172.1	159.9
April	161.8	157.8	152.5	139.4	121.2	182.4	179.6	202.6	192.5	156.2	139.9	165.2	136.1	111.9	167.9	187.9	170.0	134.5	394.1	120.0	140.3	171.5	162.4
May	163.4	160.5	153.5	140.6	120.7	191.9	182.6	207.8	190.2	156.2	130.5	162.9	136.1	112.8	167.9	184.8	170.0	134.5	352.9	121.8	140.3	171.1	161.1
June	165.4	162.3	154.5	141.9	120.7	200.0	190.7	221.9	188.7	155.1	131.3	161.5	143.0	118.0	167.9	184.8	170.0	134.5	294.1	125.5	141.4	171.1	159.7
July	165.4	162.8	155.1	141.9	119.8	198.6	193.7	226.4	184.0	156.2	130.8	161.1	143.7	122.0	167.9	181.8	170.0	134.5	241.2	125.5	141.5	171.5	157.0
August	164.6	162.3	153.5	140.6	118.2	192.9	192.6	225.7	177.9	156.2	132.1	161.5	143.7	130.1	167.9	181.8	170.0	133.3	211.8	127.3	141.7	171.1	155.7

¹ 30 articles in 1907; 15 articles in 1908-1912; 22 articles in 1913-1920; 40 articles 1921-1926.

TREND OF RETAIL PRICES OF FOOD IN THE UNITED STATES, JANUARY, 1917, TO AUGUST, 1926



Retail Prices of Coal in the United States ^a

THE following table shows the average retail prices of coal on January 15 and July 15, 1913, August 15, 1925, and July 15 and August 15, 1926, for the United States and for each of the cities from which retail food prices have been obtained. The prices quoted are for coal delivered to consumers, but do not include charges for storing the coal in cellar or coal bin where an extra handling is necessary.

In addition to the prices for Pennsylvania anthracite, prices are shown for Colorado, Arkansas, and New Mexico anthracite in those cities where these coals form any considerable portion of the sales for household use.

The prices shown for bituminous coal are averages of prices of the several kinds sold for household use.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, AUGUST 15, 1925, AND JULY 15 AND AUGUST 15, 1926

City, and kind of coal	1913		1925	1926	
	Jan. 15	July 15	Aug. 15	July 15	Aug. 15
United States:					
Pennsylvania anthracite—					
Stove.....	\$7.99	\$7.48	\$15.35	\$15.43	\$15.49
Chestnut.....	8.15	7.68	15.07	15.19	15.23
Bituminous.....	5.48	5.39	8.69	8.70	8.81
Atlanta, Ga.:					
Bituminous.....	5.88	4.83	6.68	7.37	7.65
Baltimore, Md.:					
Pennsylvania anthracite—					
Stove.....	¹ 7.70	¹ 7.24	¹ 16.00	¹ 16.00	¹ 16.00
Chestnut.....	¹ 7.93	¹ 7.49	¹ 15.50	¹ 15.50	¹ 15.50
Bituminous.....			¹ 7.55	¹ 7.63	¹ 7.67
Birmingham, Ala.:					
Bituminous.....	4.22	4.01	6.93	7.28	7.31
Boston, Mass.:					
Pennsylvania anthracite—					
Stove.....	8.25	7.50	16.00	16.25	16.25
Chestnut.....	8.25	7.75	15.75	16.00	16.00
Bridgeport, Conn.:					
Pennsylvania anthracite—					
Stove.....			15.00	15.00	15.00
Chestnut.....			15.00	15.00	15.00
Buffalo, N. Y.:					
Pennsylvania anthracite—					
Stove.....	6.75	6.54	13.62	13.79	13.75
Chestnut.....	6.90	6.80	13.29	13.39	13.39
Butte, Mont.:					
Bituminous.....			10.72	11.04	11.00
Charleston, S. C.:					
Bituminous.....	¹ 6.75	¹ 6.75	11.00	11.00	11.00
Chicago, Ill.:					
Pennsylvania anthracite—					
Stove.....	8.00	7.80	16.36	16.88	16.88
Chestnut.....	8.25	8.05	16.21	16.63	16.63
Bituminous.....	4.97	4.65	8.32	8.27	8.32
Cincinnati, Ohio:					
Bituminous.....	3.50	3.38	6.61	6.57	6.75
Cleveland, Ohio:					
Pennsylvania anthracite—					
Stove.....	7.50	7.25	14.83	14.83	15.20
Chestnut.....	7.75	7.50	14.71	14.83	14.80
Bituminous.....	4.14	4.14	8.15	8.52	8.68
Columbus, Ohio:					
Bituminous.....			6.35	6.59	6.72

¹ Per ton of 2,240 pounds.

^a Prices of coal were formerly secured semiannually and published in the March and September issues. Since June, 1920, these prices have been secured and published monthly.

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, AUGUST 15, 1925, AND JULY 15 AND AUGUST 15, 1926—Continued

City, and kind of coal	1913		1925	1926	
	Jan. 15	July 15	Aug. 15	July 15	Aug. 15
Dallas, Tex.:					
Arkansas anthracite—					
Egg			\$15.75	\$15.17	\$15.50
Bituminous	\$8.25	\$7.21	12.11	12.72	12.72
Denver, Colo.:					
Colorado anthracite—					
Furnace, 1 and 2 mixed	8.88	9.00	16.00	15.75	16.00
Stove, 3 and 5 mixed	8.50	8.50	16.25	16.00	16.50
Bituminous	5.25	4.88	10.04	9.89	10.45
Detroit, Mich.:					
Pennsylvania anthracite—					
Stove	8.00	7.45	15.50	16.00	16.00
Chestnut	8.25	7.65	15.50	15.50	15.50
Bituminous	5.20	5.20	8.89	9.30	9.25
Fall River, Mass.:					
Pennsylvania anthracite—					
Stove	8.25	7.43	15.96	16.75	16.75
Chestnut	8.25	7.61	15.71	16.25	16.25
Houston, Tex.:					
Bituminous			11.17	11.00	11.00
Indianapolis, Ind.:					
Bituminous	3.81	3.70	6.65	6.73	6.81
Jacksonville, Fla.:					
Bituminous	7.50	7.00	12.00	12.00	12.00
Kansas City, Mo.:					
Arkansas anthracite—					
Furnace			14.00	13.70	14.20
Stove No. 4			15.25	15.17	15.33
Bituminous	4.39	3.94	7.69	7.43	7.66
Little Rock, Ark.:					
Arkansas anthracite—					
Egg			13.00	13.00	13.00
Bituminous	6.00	5.33	9.85	9.41	9.45
Los Angeles, Calif.:					
Bituminous	13.52	12.50	15.13	15.31	15.31
Louisville, Ky.:					
Bituminous	4.20	4.00	6.31	6.27	6.47
Manchester, N. H.:					
Pennsylvania anthracite—					
Stove	10.00	8.50	17.00	17.00	17.00
Chestnut	10.00	8.50	16.50	17.00	17.00
Memphis, Tenn.:					
Bituminous	4.34	4.22	7.29	6.91	7.26
Milwaukee, Wis.:					
Pennsylvania anthracite—					
Stove	8.00	7.85	16.70	16.80	16.80
Chestnut	8.25	8.10	16.55	16.65	16.65
Bituminous	6.25	5.71	9.08	8.90	8.99
Minneapolis, Minn.:					
Pennsylvania anthracite—					
Stove	9.25	9.05	18.00	18.10	18.10
Chestnut	9.50	9.30	17.85	17.95	17.95
Bituminous	5.89	5.79	10.88	11.02	11.03
Mobile, Ala.:					
Bituminous			9.46	9.42	9.50
Newark, N. J.:					
Pennsylvania anthracite—					
Stove	6.50	6.25	13.73	14.00	13.95
Chestnut	6.75	6.50	13.25	13.50	13.45
New Haven, Conn.:					
Pennsylvania anthracite—					
Stove	7.50	6.25	14.55	15.05	15.15
Chestnut	7.50	6.25	14.55	15.05	15.15
New Orleans, La.:					
Bituminous	6.06	6.06	9.21	9.18	9.32
New York, N. Y.:					
Pennsylvania anthracite—					
Stove	7.07	6.66	14.37	14.75	14.75
Chestnut	7.14	6.80	14.03	14.50	14.50
Norfolk, Va.:					
Pennsylvania anthracite—					
Stove			15.13	15.50	15.50
Chestnut			15.13	15.50	15.50
Bituminous			8.52	8.52	8.52
Omaha, Nebr.:					
Bituminous	6.63	6.13	9.76	9.48	9.67

¹ Per 10-barrel lot (1,800 pounds).

AVERAGE RETAIL PRICES OF COAL PER TON OF 2,000 POUNDS, FOR HOUSEHOLD USE, ON JANUARY 15 AND JULY 15, 1913, AUGUST 15, 1925, AND JULY 15 AND AUGUST 15, 1926—Continued

City, and kind of coal	1913		1925	1926	
	Jan. 15	July 15	Aug. 15	July 15	Aug. 15
Peoria, Ill.: Bituminous.....			\$6.33	\$6.80	\$6.79
Philadelphia, Pa.: Pennsylvania anthracite— Stove.....	¹ \$7.16	¹ \$6.89	¹ 15.00	¹ 15.86	¹ 15.79
Chestnut.....	¹ 7.38	¹ 7.14	¹ 14.57	¹ 15.54	¹ 15.54
Pittsburgh, Pa.: Pennsylvania anthracite— Chestnut.....	¹ 8.00	¹ 7.44	14.88	15.00	15.13
Bituminous.....	² 3.16	² 3.18	6.14	5.59	5.55
Portland, Me.: Pennsylvania anthracite— Stove.....			16.32	16.56	16.56
Chestnut.....			16.32	16.56	16.56
Portland, Oreg.: Bituminous.....	9.79	9.66	12.98	12.04	11.96
Providence, R. I.: Pennsylvania anthracite— Stove.....	⁴ 8.25	⁴ 7.50	⁴ 16.00	⁴ 16.25	⁴ 16.25
Chestnut.....	⁴ 8.25	⁴ 7.75	⁴ 15.75	⁴ 16.00	⁴ 16.00
Richmond, Va.: Pennsylvania anthracite— Stove.....	8.00	7.25	15.00	15.75	15.83
Chestnut.....	8.00	7.25	15.00	15.75	15.50
Bituminous.....	5.50	4.94	7.94	9.04	9.09
Rochester, N. Y.: Pennsylvania anthracite— Stove.....			14.40	14.60	14.60
Chestnut.....			14.05	14.15	14.15
St. Louis, Mo.: Pennsylvania anthracite— Stove.....	8.44	7.74	16.70	16.75	16.70
Chestnut.....	8.68	7.99	16.45	16.50	16.45
Bituminous.....	3.36	3.04	6.10	6.04	6.17
St. Paul, Minn.: Pennsylvania anthracite— Stove.....	9.20	9.05	18.00	18.10	18.10
Chestnut.....	9.45	9.30	17.85	17.95	17.95
Bituminous.....	6.07	6.04	11.19	11.22	11.22
Salt Lake City, Utah: Colorado anthracite— Furnace, 1 and 2 mixed.....	11.00	11.50	18.25	18.00	18.00
Stove, 3 and 5 mixed.....	11.00	11.50	18.25	18.00	18.00
Bituminous.....	5.64	5.46	8.41	6.49	6.49
San Francisco, Calif.: New Mexico anthracite— Cerrojos egg.....	17.00	17.00	25.00	25.00	25.00
Colorado anthracite— Egg.....	17.00	17.00	24.50	24.50	24.50
Bituminous.....	12.00	12.00	16.39	16.22	16.22
Savannah, Ga.: Bituminous.....			³ 10.08	³ 10.88	³ 10.88
Seranton, Pa.: Pennsylvania anthracite— Stove.....	4.25	4.31	10.58	10.92	11.00
Chestnut.....	4.50	4.56	10.50	10.67	10.67
Seattle, Wash.: Bituminous.....	7.63	7.70	9.81	9.05	9.76
Springfield, Ill.: Bituminous.....			4.38	4.33	4.38
Washington, D. C.: Pennsylvania anthracite— Stove.....	¹ 7.50	¹ 7.38	¹ 15.44	¹ 15.53	¹ 15.66
Chestnut.....	¹ 7.65	¹ 7.53	¹ 14.97	¹ 15.22	¹ 15.39
Bituminous— Prepared sizes, low volatile.....			¹ 10.46	¹ 10.92	¹ 10.79
Prepared sizes, high volatile.....			¹ 8.38	¹ 8.75	¹ 8.75
Run of mine, mixed.....			¹ 7.44	¹ 7.75	¹ 7.75

¹ Per ton of 2,240 pounds.

² Per 25-bushel lot (1,900 pounds).

³ 50 cents per ton additional is charged for "binning." Most customers require binning or basketing the coal into the cellar.

⁴ All coal sold in Savannah is weighed by the city. A charge of 10 cents per ton or half ton is made. This additional charge has been included in the above prices.

Index Numbers of Wholesale Prices in August, 1926

A FURTHER slight decline in the general level of wholesale prices from July to August is shown by information gathered in representative markets by the Bureau of Labor Statistics of the United States Department of Labor. The bureau's weighted index number, which includes 404 commodities or price series, registered 149.2 for August, compared with 150.7 for July, a decrease of 1 per cent. Compared with August, 1925, with an index number of 160.4, there was a decrease of 7 per cent.

Farm products averaged somewhat lower than in July, due mainly to declines in grains, cattle, hogs, lambs, live poultry, and onions. Foods also averaged considerably lower than in the month before, and minor decreases were reported for chemicals and drugs, house-furnishing goods, and miscellaneous commodities. On the other hand, clothing materials, fuels, metals, and building materials showed slight increases for August over July.

Of the 404 commodities or price series for which comparable information for July and August was collected decreases were shown in 109 instances and increases in 109 instances. In 186 instances no change in price was reported.

INDEX NUMBERS OF WHOLESALE PRICES, BY GROUPS OF COMMODITIES
[1913=100.0]

Commodity group	August, 1925	1926	
		July	August
Farm products.....	163.1	140.8	137.9
Foods.....	159.2	153.6	150.8
Clothing materials.....	189.7	173.3	174.7
Fuels.....	170.0	177.0	179.5
Metals and metal products.....	127.3	126.2	126.6
Building materials.....	172.4	171.5	171.8
Chemicals and drugs.....	134.6	130.9	130.8
House-furnishing goods.....	169.2	161.1	160.8
Miscellaneous.....	137.9	122.5	121.8
All commodities.....	160.4	150.7	149.2

Comparing prices in August with those of a year ago, as measured by changes in the index numbers, it is seen that large decreases took place in farm products, clothing materials, and miscellaneous commodities, with smaller decreases in foods, house-furnishing goods, and chemicals and drugs. Fuels, on the other hand, averaged somewhat higher than in August of last year. Practically no change in the general price level, as compared with a year ago, is shown for building materials and metals and metal products.

Comparison of Retail Price Changes in the United States and in Foreign Countries

THE principal index numbers of retail prices published by foreign countries have been brought together with those of this bureau in the subjoined table after having been reduced in most cases to a common base, namely, prices for July, 1914, equal 100. This base was selected instead of the average for the year 1913, which is used in other tables of index numbers compiled by the bureau, because of the fact that in numerous instances satisfactory information for 1913 was not available. A part of the countries shown in the table now publish index numbers of retail prices on the July, 1914, base. In such cases, therefore, the index numbers are reproduced as published. For other countries the index numbers here shown have been obtained by dividing the index for each month specified in the table by the index for July, 1914, or the nearest period thereto as published in the original sources. As stated in the table, the number of articles included in the index numbers for the different countries differs widely. These results should not, therefore, be considered as closely comparable with one another. In certain instances, also, the figures are not absolutely comparable from month to month over the entire period, owing to slight changes in the list of commodities and the localities included at successive dates.

dates.	1913	1914	1915	1916	1917	1918	1919	1920	1921	1922	1923	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933	1934	1935	1936	1937	1938	1939	1940	1941	1942	1943	1944	1945	1946	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	1958	1959	1960	1961	1962	1963	1964	1965	1966	1967	1968	1969	1970	1971	1972	1973	1974	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988	1989	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033	2034	2035	2036	2037	2038	2039	2040	2041	2042	2043	2044	2045	2046	2047	2048	2049	2050	2051	2052	2053	2054	2055	2056	2057	2058	2059	2060	2061	2062	2063	2064	2065	2066	2067	2068	2069	2070	2071	2072	2073	2074	2075	2076	2077	2078	2079	2080	2081	2082	2083	2084	2085	2086	2087	2088	2089	2090	2091	2092	2093	2094	2095	2096	2097	2098	2099	2100	2101	2102	2103	2104	2105	2106	2107	2108	2109	2110	2111	2112	2113	2114	2115	2116	2117	2118	2119	2120	2121	2122	2123	2124	2125	2126	2127	2128	2129	2130	2131	2132	2133	2134	2135	2136	2137	2138	2139	2140	2141	2142	2143	2144	2145	2146	2147	2148	2149	2150	2151	2152	2153	2154	2155	2156	2157	2158	2159	2160	2161	2162	2163	2164	2165	2166	2167	2168	2169	2170	2171	2172	2173	2174	2175	2176	2177	2178	2179	2180	2181	2182	2183	2184	2185	2186	2187	2188	2189	2190	2191	2192	2193	2194	2195	2196	2197	2198	2199	2200	2201	2202	2203	2204	2205	2206	2207	2208	2209	2210	2211	2212	2213	2214	2215	2216	2217	2218	2219	2220	2221	2222	2223	2224	2225	2226	2227	2228	2229	2230	2231	2232	2233	2234	2235	2236	2237	2238	2239	2240	2241	2242	2243	2244	2245	2246	2247	2248	2249	2250	2251	2252	2253	2254	2255	2256	2257	2258	2259	2260	2261	2262	2263	2264	2265	2266	2267	2268	2269	2270	2271	2272	2273	2274	2275	2276	2277	2278	2279	2280	2281	2282	2283	2284	2285	2286	2287	2288	2289	2290	2291	2292	2293	2294	2295	2296	2297	2298	2299	2300	2301	2302	2303	2304	2305	2306	2307	2308	2309	2310	2311	2312	2313	2314	2315	2316	2317	2318	2319	2320	2321	2322	2323	2324	2325	2326	2327	2328	2329	2330	2331	2332	2333	2334	2335	2336	2337	2338	2339	2340	2341	2342	2343	2344	2345	2346	2347	2348	2349	2350	2351	2352	2353	2354	2355	2356	2357	2358	2359	2360	2361	2362	2363	2364	2365	2366	2367	2368	2369	2370	2371	2372	2373	2374	2375	2376	2377	2378	2379	2380	2381	2382	2383	2384	2385	2386	2387	2388	2389	2390	2391	2392	2393	2394	2395	2396	2397	2398	2399	2400	2401	2402	2403	2404	2405	2406	2407	2408	2409	2410	2411	2412	2413	2414	2415	2416	2417	2418	2419	2420	2421	2422	2423	2424	2425	2426	2427	2428	2429	2430	2431	2432	2433	2434	2435	2436	2437	2438	2439	2440	2441	2442	2443	2444	2445	2446	2447	2448	2449	2450	2451	2452	2453	2454	2455	2456	2457	2458	2459	2460	2461	2462	2463	2464	2465	2466	2467	2468	2469	2470	2471	2472	2473	2474	2475	2476	2477	2478	2479	2480	2481	2482	2483	2484	2485	2486	2487	2488	2489	2490	2491	2492	2493	2494	2495	2496	2497	2498	2499	2500	2501	2502	2503	2504	2505	2506	2507	2508	2509	2510	2511	2512	2513	2514	2515	2516	2517	2518	2519	2520	2521	2522	2523	2524	2525	2526	2527	2528	2529	2530	2531	2532	2533	2534	2535	2536	2537	2538	2539	2540	2541	2542	2543	2544	2545	2546	2547	2548	2549	2550	2551	2552	2553	2554	2555	2556	2557	2558	2559	2560	2561	2562	2563	2564	2565	2566	2567	2568	2569	2570	2571	2572	2573	2574	2575	2576	2577	2578	2579	2580	2581	2582	2583	2584	2585	2586	2587	2588	2589	2590	2591	2592	2593	2594	2595	2596	2597	2598	2599	2600	2601	2602	2603	2604	2605	2606	2607	2608	2609	2610	2611	2612	2613	2614	2615	2616	2617	2618	2619	2620	2621	2622	2623	2624	2625	2626	2627	2628	2629	2630	2631	2632	2633	2634	2635	2636	2637	2638	2639	2640	2641	2642	2643	2644	2645	2646	2647	2648	2649	2650	2651	2652	2653	2654	2655	2656	2657	2658	2659	2660	2661	2662	2663	2664	2665	2666	2667	2668	2669	2670	2671	2672	2673	2674	2675	2676	2677	2678	2679	2680	2681	2682	2683	2684	2685	2686	2687	2688	2689	2690	2691	2692	2693	2694	2695	2696	2697	2698	2699	2700	2701	2702	2703	2704	2705	2706	2707	2708	2709	2710	2711	2712	2713	2714	2715	2716	2717	2718	2719	2720	2721	2722	2723	2724	2725	2726	2727	2728	2729	2730	2731	2732	2733	2734	2735	2736	2737	2738	2739	2740	2741	2742	2743	2744	2745	2746	2747	2748	2749	2750	2751	2752	2753	2754	2755	2756	2757	2758	2759	2760	2761	2762	2763	2764	2765	2766	2767	2768	2769	2770	2771	2772	2773	2774	2775	2776	2777	2778	2779	2780	2781	2782	2783	2784	2785	2786	2787	2788	2789	2790	2791	2792	2793	2794	2795	2796	2797	2798	2799	2800	2801	2802	2803	2804	2805	2806	2807	2808	2809	2810	2811	2812	2813	2814	2815	2816	2817	2818	2819	2820	2821	2822	2823	2824	2825	2826	2827	2828	2829	2830	2831	2832	2833	2834	2835	2836	2837	2838	2839	2840	2841	2842	2843	2844	2845	2846	2847	2848	2849	2850	2851	2852	2853	2854	2855	2856	2857	2858	2859	2860	2861	2862	2863	2864	2865	2866	2867	2868	2869	2870	2871	2872	2873	2874	2875	2876	2877	2878	2879	2880	2881	2882	2883	2884	2885	2886	2887	2888	2889	2890	2891	2892	2893	2894	2895	2896	2897	2898	2899	2900	2901	2902	2903	2904	2905	2906	2907	2908	2909	2910	291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INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES

Country...	United States	Canada	Belgium	Czecho-slovakia	Denmark	Finland	France (except Paris)	France (Paris)	Germany
Number of localities...	51	60	50	22	100	21	320	1	71
Commodities included...	43 foods	29 foods	56 (foods, etc.)	32 (17 foods)	Foods	36 foods	13 (11 foods)	13 (11 foods)	Foods
Computing agency...	Bureau of Labor Statistics	Department of Labor	Ministry of Industry and Labor	Office of Statistics	Government Statistical Department	Central Bureau of Statistics	Ministry of Labor	Ministry of Labor	Federal Statistical Bureau
Base=100...	July, 1914	July, 1914	April, 1914	July, 1914	July, 1914	January-June, 1914	August, 1914	July, 1914	October, 1913 July, 1914
Year and month									
1923									
Jan.	141	142	383	941	180	1108		309	
Feb.	139	142	397	934		1103	331	316	
Mar.	139	145	408	926		1096		321	
Apr.	140	143	409	927		1047		320	
May	140	140	413	928		1016	337	325	
June	141	138	419	933		1004		331	
July	144	137	429	921	188	1003		321	
Aug.	143	142	439	892		1087	349	328	
Sept.	146	141	453	903		1103		339	
Oct.	147	144	458	901		1140		349	
Nov.	148	144	463	898		1133	373	355	
Dec.	147	145	470	909		1112		365	
1924									
Jan.	146	145	480	917	194	1080		376	127
Feb.	144	145	495	917		1070	400	384	117
Mar.	141	143	510	908		1067		392	120
Apr.	138	137	498	907		1035		380	123
May	138	133	485	916		1037	393	378	126
June	139	133	492	923		1040		370	120
July	140	134	493	909	200	1052		360	126
Aug.	141	137	498	897		1125	400	366	122
Sept.	144	139	503	908		1125		374	125
Oct.	145	139	513	916		1156		383	124
Nov.	147	141	520	922		1160	426	396	135
Dec.	148	143	521	928		1160		404	135
1925									
Jan.	151	145	521	899	215	1130		408	137
Feb.	148	147	517	911		1120	440	410	145
Mar.	148	145	511	904		1152		415	146
Apr.	148	142	506	901		1137		409	144
May	148	141	502	894		1097	434	418	141
June	152	141	505	914		1101		422	146
July	156	141	509	916	210	1145		421	154
Aug.	157	146	517	894		1222	451	423	154
Sept.	156	146	525	884		1187		431	153
Oct.	158	147	533	875		1165		433	151
Nov.	164	151	534	863		1164	471	444	147
Dec.	162	156	534	866		1138		463	146
1926									
Jan.	161	157	527	854	177	1090		480	143
Feb.	158	155	526	845		1106	503	495	142
Mar.	156	154	521	832		1100		497	141
Apr.	159	153	529	832		1085		503	142
May	158	152	558	837		1078	523	522	142
June	156	149	579	860		1090		544	143

¹ Revised index (29 foods) since January, 1925.

INDEX NUMBERS OF RETAIL PRICES IN THE UNITED STATES AND IN OTHER COUNTRIES—Continued

Country...	Italy	Nether-lands	Norway	Sweden	Switzer-land	United King-dom	South Africa	India (Bom-bay)	Aus-tralia	New Zea-land
Number of localities	47	6	31	49	33	600	9	1	30	25
Commodities in-cluded	20 foods and charcoal	29 (27 foods)	Foods	40 (foods, etc.)	Foods	21 foods	18 foods	17 foods	46 foods	59 foods
Computing agency	Ministry of National Economy	Central Bureau of Statistics	Central Bureau of Statistics	Social Board	Labor Office (Revised)	Ministry of Labor	Office of Census and Statistics	Labor Office (Revised)	Bureau of Census and Statistics	Census and Statistics Office
Base=100	1913	January-June, 1914	July, 1914	July, 1914	July, 1914	July, 1914	1914	July, 1914	July, 1914	July, 1914
Year and month										
1923										
Jan.....	542	148	214	166	160	175	117	151	145	139
Feb.....	527	149	214	165	158	173	117	150	144	140
Mar.....	524	149	214	166	159	171	117	149	145	141
Apr.....	530	149	212	163	161	168	117	150	152	142
May.....	535	147	214	161	164	162	118	148	156	143
June.....	532	145	213	161	166	160	118	146	162	142
July.....	518	145	218	160	166	162	116	148	164	142
Aug.....	512	143	220	161	166	165	115	149	165	143
Sept.....	514	142	218	165	167	168	115	149	161	145
Oct.....	517	145	217	165	167	172	117	147	157	146
Nov.....	526	149	221	164	171	173	120	147	157	147
Dec.....	528	149	226	164	172	176	118	152	156	147
1924										
Jan.....	527	150	230	163	173	175	120	154	155	150
Feb.....	529	151	234	162	172	177	122	151	153	149
Mar.....	523	152	241	162	171	176	122	147	152	150
Apr.....	527	152	240	159	169	167	122	143	150	150
May.....	530	151	241	159	169	163	122	143	151	150
June.....	543	151	240	158	170	160	120	147	149	150
July.....	538	150	248	159	170	162	117	151	148	148
Aug.....	534	150	257	163	170	164	117	156	147	146
Sept.....	538	152	261	165	170	166	117	156	146	145
Oct.....	556	154	264	172	174	172	120	156	146	145
Nov.....	583	156	269	172	175	179	122	157	147	148
Dec.....	601	157	274	172	175	180	121	156	148	150
1925										
Jan.....	609	156	277	170	172	178	120	152	148	147
Feb.....	609	157	283	170	172	176	120	152	149	146
Mar.....	610	157	284	171	171	176	121	155	151	149
Apr.....	606	155	276	170	169	170	124	153	152	149
May.....	600	154	265	169	168	167	123	151	154	150
June.....	602	152	261	169	169	166	122	149	155	149
July.....	605	152	260	169	169	167	120	152	156	151
Aug.....	619	152	254	170	169	168	119	147	156	152
Sept.....	642	152	241	168	170	170	118	146	156	153
Oct.....	645	149	228	166	168	172	119	148	157	155
Nov.....	652	149	223	165	168	172	117	149	156	156
Dec.....	653	148	221	164	167	174	116	151	155	154
1926										
Jan.....	653	148	216	162	165	171	116	151	155	154
Feb.....	649	147	212	160	163	168	117	150	154	153
Mar.....	636	147	205	159	161	165	118	151	159	152
Apr.....	633	146	198	158	161	159	119	150	163	151
May.....	643	146	195	157	159	158	119	150	163	151
June.....		146	194	157	159	158	118	152	162	151

Size of the Average Family in Western Australia¹

UNDER the industrial arbitration act of Western Australia the court of arbitration is required to determine before June 14 of each year a basic wage for male and female workers. This basic wage is the minimum which may be paid to adult workers who are not incapacitated in some way, and by the terms of the act it must be a sum sufficient to enable the average worker to whom it applies to live in reasonable comfort, having regard to any domestic obligations to which such average worker would ordinarily be subject. The decision given on June 11 of this year sets the basic wage for adult males at £4 5s.² and for adult females at £2 5s. 11d. a week. The announcement of the decision included also a discussion of how the amount was fixed, with a consideration of the size of the average workingman's family, and the number for whose support he could be held responsible.

In the hearing which preceded the wage determination the employers' representative argued that the average worker should be held responsible only for the support of a wife and one dependent child, on the ground that, taking into account both single and married men, the average number of children was 0.8 or 0.9, or, roughly, 1. The workers' representative, on the other hand, argued that the wage should be determined by the needs of a man with a wife and three dependent children—the so-called typical family.

The president of the court held that where such divergence of opinion existed it was necessary to find out the facts about the size of the dependent family. The census of 1921 showed that the average issue of husbands in Australia was 3.38 and in Western Australia 3.27 per husband. Obviously, however, not all of the children here included would be dependent at any given time. Recent statistical studies showed that the number of occupants of private houses in the metropolitan area of Western Australia was 4.44 per house; that the average number of dependent children under 14 years of age of wage earners occupying houses in the metropolitan district of Western Australia was 1.55 and for the whole of the State 1.51, while the average number of dependent children under 14 years of age per householder for Western Australia was 1.34 in the metropolitan area and 1.35 for the whole of the State. The following table, compiled in the Commonwealth statistician's office, shows the number of dependent children under 14 by the location and position, as to employment, of the father:

DEPENDENT CHILDREN UNDER 14, ACCORDING TO CENSUS OF 1921, BY OCCUPATION CLASS OF FATHER

Locality	Dependent children under 14 per male householder				
	Em- ployer	Workers on own account	Wage earners and sal- aried em- ployees	Unem- ployed	Total
Australia.....	1.49	1.45	1.57	1.35	1.45
Metropolitan.....	1.28	1.21	1.44	1.22	1.31
Urban.....	1.54	1.42	1.73	1.47	1.55
Rural.....	1.50	1.52	1.66	1.46	1.54
Western Australia.....	1.47	1.28	1.51	1.22	1.41
Metropolitan.....	1.42	1.29	1.55	1.23	1.44
Urban.....	1.63	1.44	1.77	1.40	1.64
Rural.....	1.48	1.26	1.36	1.08	1.32

¹ Western Australia. [Court of Arbitration.] Basic wage declaration [under industrial arbitration act, 1912-1925] and reasons of the court. Perth, 1926.

² At par, pound sterling=\$4.8665, shilling=24.3 cents, penny=2.03 cents; exchange rate about par.

In confirmation of the inherent reasonableness of these figures the president of the court cited the results of a special study of the families of workers in the Government service, made when the question of providing pensions was under discussion.

Here, if anywhere, one would expect to see the average number of dependent children at its highest, because of the regularity of employment and security of tenure of those engaged in the Government service. The return, however, shows that the average number of children under 14 years of age per married employee in the clerical and professional division in the grades aged from 22 to 57 was 1.634 for the clerical and professional division and 1.978 for the general division. So that here, in the most sheltered occupation of all, the average number of children under 14 is still below two.

In view of all these facts the president held that the number of dependent children under 14 per average worker can not be set as high as three.

The fact therefore remains that the third dependent child in the family of our average worker simply does not exist, and I consider the sooner the fiction that this third child has been or is being provided for in any wage fixture disappears the better.

It is evident, however, the president points out, that in many cases the child's dependency does not cease at 14 and that 16 would be a fairer age limit. Roughly, the number of children under 16 per married male, as shown by the census of 1911, is two. Therefore, summing up the whole situation, it seemed reasonable to hold that the average worker referred to in the act should be taken to mean a married worker with a wife and two children dependent upon him.

One member of the court objected to this decision, mainly upon the ground that the decision as to the number of children to which the wage must be adjusted tended to influence the actual size of families, parents being inclined not to have more children than their wages were designed to support. No data were produced to support this view, though reference was made to the fact that since the standard of three children was fixed, some 19 years ago, the average number of children per family had been decreasing.

The basic weekly wage for males was fixed to include the following allowances:

	£	s.	d.
Food.....	1	16	0
Rent.....	1	0	0
Clothing.....	0	13	6
Miscellaneous.....	0	15	6
Total.....	4	5	0

The basic wage for adult women was fixed at 54 per cent of the basic wage for adult males, "that being the proportion most generally used throughout Australia."

LABOR AGREEMENTS, AWARDS, AND DECISIONS

AGREEMENTS

Barbers—White Plains, N. Y.

THE following sections are taken from the agreement of Barbers' Local No. 816, White Plains, N. Y.

ARTICLE I, SECTION 1. The wages of journeymen barbers in this jurisdiction shall be at the rate of \$30 a week and a commission of 50 per cent over \$45.

SEC. 4. If journeyman takes an extra day off, employer shall take \$5 from weekly wages and commission shall be 50 per cent over \$35.

SEC. 5. Shops shall stay open the week before Christmas Day until 8 p. m.

ART. II, SEC. 1. Shop hours shall be: From 8 a. m. to 7 p. m. From 8 a. m. to 9 p. m. on Saturdays.

SEC. 2. Shops shall close all day on the following holidays. Keep open the night before until 9 p. m. Decoration Day, Fourth of July, Labor Day, Thanksgiving, Christmas, New Year's, and Washington's Birthday.

SEC. 2a. Shops shall close at noon on Columbus Day and election day.

SEC. 2b. Lincoln's Birthday, shops shall stay open regular business hours.

SEC. 3. Journeymen shall take one and one-half hours for meals.

SEC. 4. Journeymen shall take one day off every other week with pay.

SEC. 5. Journeymen can not sell day off, and for failure to take day off a fine of \$2 shall be imposed.

Cloth Hat and Cap Makers—New York City

THE New York Joint Council, comprising Locals Nos. 1, 2, 3, 17, 23, 30, and 40 of the Cloth Hat, Cap, and Millinery Workers' International Union has concluded an agreement with the jobbers in the industry, the first that has been made with them. The jobbers maintain no shops of their own. They merely give the manufacturers orders to make up certain goods from material furnished by either the manufacturer or the jobber. The jobbers therefore had no direct connection with the workmen and saw no need of dealing with the union. The union, however, felt that the jobbers were the real employers of labor and were the support of the "social" and "corporation" shops which the union was endeavoring to eradicate from the industry.

For some time the union has tried to unionize the jobbers. The last two conventions of the international wrestled with the question and concluded that agreements must be made with the jobbers. The latter formed the Hat and Cap Wholesale Association and after a strike made an agreement with the union.

The following extracts are taken from the agreement made with the independent jobbers. The agreement made with the jobbers' association contains several additional provisions.

1. The union obligates itself for its members that they will perform their work on the hats and caps contracted for by the jobber in any of the union shops conscientiously and faithfully.

2. The jobber obligates himself to employ for the making of his cloth hats and caps, or purchase his cloth hats and caps from and deal with such manufacturers only as maintain union shops, certified as such in writing by the union. The jobber shall not make or cause to be made any work for any person against whom the union has declared a strike until such strike in each case has been fully settled. It is further agreed that upon receipt of notice from the union that a certain manufacturer has been declared a nonunion manufacturer the jobber will immediately withdraw his work from him even though such manufacturer was before certified by the union to be a union manufacturer.

3. The jobber shall immediately and at the beginning of every season furnish the union with a list of all manufacturers with whom he is contracting for merchandise.

With a view of securing greater stability and regularity of employment, the jobber agrees that the manufacturers enumerated on the aforesaid list will be considered by him as his permanent contractors for the respective season, and that he will distribute his work among them on a fair and equitable basis, and that he will not employ during the season any additional manufacturers before supplying the manufacturers specified on the said list with full-time work. Exceptions to this provision may be permitted only in case the jobber will need some special merchandise which the manufacturers included on his list can not produce satisfactorily, and only with the consent of the union.

4. Since the best and most conclusive evidence that cloth hats and caps have been produced under fair and sanitary surroundings is when such hats and caps carry the union label, it is hereby agreed that both sides hereto will cooperate in making all necessary arrangements by virtue of which all cloth hats and caps handled by the jobber shall bear the union label.

6. As security for the faithful performance of the within agreement the jobber has deposited with the union ----, the receipt of which is hereby acknowledged, and title to which shall immediately pass to the union, and such sum shall be retained by the union as liquidated damages in the event of a total breach on the part of the jobber of this agreement.

Should the jobber be found giving work to or dealing with a manufacturer who has not been certified by the union as maintaining a union shop, the jobber shall become liable for and pay to the union a sum of money to be mutually agreed upon and to be sufficiently high to offset the advantage gained by the jobber in such transactions, together with an appropriate penalty. Such amount to be deducted from the security deposit above mentioned, and the jobber shall thereupon immediately make good the deficiency in said deposit resulting from such payment.

7. All complaints, disputes, or grievances between the jobber and the union which the parties hereto shall prove to be unable to adjust between themselves shall be referred for a decision to the chairman of the board of adjustment of the Cloth Hat and Cap Trade, whose decision shall be final and binding upon both parties.

Electrical Workers—Portland, Oreg.

THE Portland Electric Power Co., operating in Oregon and Washington, made an agreement with Electrical Workers' Local No. 125, April 22, 1926, from which the following extracts are taken:

ARTICLE III.—*Linemen*

1. All framing and erecting of poles or towers on the job shall be done by journeymen linemen. Derrick men shall not be required to climb poles.

2. All framing of poles in the pole yard shall be done by the regular pole-yard crew under the direct supervision of a journeyman receiving the same rate as a journeyman lineman.

3. All work on service wires and conduits, including customers' service, is to be done by journeymen, except that customers may be connected by line inspectors when service wires are already installed. Meter installers may connect wires from meter loops to meter and connect same when service is already installed.

5. All linemen employed on work over 80 feet above ground, except on buildings, shall be paid double time.

6. The regular shift for all men covered by this agreement, except operating and rotating shifts, shall be from 8 a. m. to 12 noon and from 12.30 p. m. to 4.30 p. m. At the option of the company, this shift may be changed to meet emergency work, construction work, or train schedules: *Provided, however,* That no change of shift will be made for a period of less than 14 days without overtime rate applying to the hours before 8 a. m. or after 4.30 p. m. Such shift lasting 14 days or more will be considered a regular shift and will be paid for at straight-time rate. It is also provided that the noon hour may be from 11.30 a. m. to 12 noon where it is required by absolute necessity: *Provided, however,* That one hour's previous notice has been given employee by company.

7. Emergency trolley men shall be required to do any work that is required of a journeyman and shall work any shift of 8 consecutive hours in 24, Sundays included, and shall have one day off in seven. The above men shall work on the same shift continuously for at least 14 days without change of hours, except when men lay off of their own accord, in which event the shifts may be changed to meet such conditions on straight-time rate, unless they are required by the company to work more than 8 hours in any 24 period: *Provided, however,* That at least 8 hours intervene between shifts.

The company shall not use emergency trolley men on Sunday to do new construction which otherwise would require calling out men who would be entitled to a special rate for Sunday work.

ARTICLE IV.—*Substation and steam station operators*

1. The term "chief operator" used herein shall mean the operator who is responsible for the general condition and operation of the station or substation where he is employed. The second and third operators shall be the other two operators on duty at the station or substation.

10. Relief operators shall receive as wages not less than the amount paid the highest employee relieved.

11. All operators shall have one regular day off in seven without pay.

13. In case an operator is required to work on his regular appointed day off he shall receive overtime rate.

14. Operators shall be granted vacation by giving the company two weeks' notice, provided the company can grant same without inconvenience and additional cost.

ARTICLE V.—*Water-power-plant employees*

2. All rules applying to substation and steam-station operators regarding rotation of shifts and time off shall apply to water-power-plant operators.

4. All rules applying to operators regarding time off shall apply to the wheel tenders and wipers.

ARTICLE VII.—*Trouble men and trouble dispatchers*

2. Trouble men shall work shifts of any 8 consecutive hours in 24.

4. Trouble men shall have one day off in seven and each alternate day off shall be Sunday, when practicable, and if required to work on their regular day off shall be paid at the rate of double time.

6. Trouble dispatchers shall work a shift of eight consecutive hours and shall rotate shifts. They shall have one day off in seven and each alternate day off shall be Sunday, when practicable, and shall receive 15 days' consecutive time off per year with pay.

ARTICLE VIII.—*Miscellaneous employees*

1. The regular shift for each series arc lamp trimmer shall be the time necessary to keep the lamps in his care properly trimmed and in good operating condition.

2. Line patrolmen shall not be required to do any new construction work.

3. Telephone work shall be performed by journeymen linemen with the regular telephone man rated as foreman.

5. Night journeymen auto repairmen and night auto repair and battery men shall have a regular 30-minute lunch period. Night auto repair and battery men shall receive journeymen auto repairmen's scale.

6. There shall be a truck driver on all trucks doing repair and construction work. Truck drivers may be required to have truck in gang service eight hours. Truck drivers to receive double time for all time worked over eight hours, and

when required to perform the duties of a groundman they shall receive groundman's pay. When line crews are out on the job and cease work because of weather conditions, truck drivers shall be allowed time until their trucks are put away in the garage unless relieved. This does not apply when crews do not go out on the job at the beginning of their shift because of stormy weather.

ARTICLE IX.—*General working rules*

1. Foremen shall not be required to handle tools or do that class of work required of journeymen except when in charge of three or less journeymen or in case of emergency.

4. There shall not be more than one apprentice to every gang of from three to six journeymen. An apprentice shall work under the direct supervision of a journeyman.

5. The company agrees to pay all employees covered by this agreement at least twice a month, on or before the 25th, from the 1st up to the 15th of the current month, inclusive, and on and before the 10th of the month, from the 16th to the last of the preceding month, inclusive. If pay day falls on a holiday or Sunday the preceding day becomes the pay day.

6. The company agrees to furnish protective shields and first-aid sets for the protection of men when working on any electrical work where protective apparatus is needed or requested.

8. All skilled employees covered by this agreement and listed in Article I, section 2, shall be members of the International Brotherhood of Electrical Workers affiliated with the American Federation of Labor. In the hiring of unskilled labor, preference shall be given members of the International Brotherhood of Electrical Workers. It is provided that in the event the International Brotherhood of Electrical Workers can not supply men needed the company may hire men wherever available.

9. In assignment of men to a better position or in laying off men because of lack of work, ability being equal, seniority shall govern.

10. Eight hours shall constitute a day's work for all employees covered by this agreement. Employees of the line department shall travel from shop to shop on company time. Inside construction men working at station or substation inside city limits shall report at the station or substation at which work is being done. Linemen shall report at the Hawthorne Building. Hawthorne Building shall be shop headquarters for all out-of-town jobs in the Portland district. The company agrees to furnish board and lodging for all employees sent on out-of-town work, cost of meals not to exceed \$1.50 per day. This rule is not to apply to noonday meal where men start from and return to headquarters every day, nor does it apply to men hired for any particular job which may be outside of the city unless by special arrangement.

12. All employees covered by this agreement shall be allowed overtime at the rate of double time for all time worked other than the regular day or shift; overtime to begin when men are called and end when they return to the place where called. Two hours' time at double time shall be allowed for all emergency calls after the day's work is finished should the actual working time be less than two hours.

17. All monthly employees covered by this agreement shall be given 15 consecutive days' time off per year with full pay after having been employed for one year.

ARTICLE XI.—*Wages*

	Per day
Flume maintenance men.....	\$4. 60
Helpers, construction department.....	4. 60
Incandescent boulevard and sign cleaner and lamp replacer.....	4. 60
Watchman and caretaker of Hawthorne Building.....	4. 60
Apprentice auto repair men.....	4. 78
Line and construction, first 6 months.....	4. 78
Line and construction, after 6 months.....	5. 06
Storeroom men, first 6 months.....	5. 06
Residence and small-power meter testers, first 6 months.....	4. 60
Apprentices, line and construction, after 12 months.....	5. 60
Groundmen.....	5. 60
Storeroom men, after 6 months.....	5. 50
Apprentices, line and construction, after 18 months.....	5. 90
Assistant operator, Class C.....	5. 70

	Per day
Wipers.....	\$5. 91
Apprentices, line and construction, after 24 months.....	6. 10
Residence and small-power meter testers, second 6 months.....	5. 15
Inspectors, first 6 months.....	5. 60
Truck drivers.....	5. 34
Storeroom men, after 12 months.....	6. 00
Assistant operator, Class B.....	6. 16
Second and third operator, Class D.....	6. 16
Wheel tender.....	6. 16
Apprentices, line and construction, after 30 months.....	6. 40
Line inspectors, after 6 months.....	6. 10
Pole truck drivers.....	5. 89
Assistant operators, Class A.....	6. 31
Chief operators, Class D.....	6. 36
Residence and small-power meter testers, after 12 months.....	5. 90
Journeymen auto repair men.....	6. 44
Second and third operators, Class C.....	6. 52
Flume foreman.....	6. 78
Line inspectors, after one year.....	6. 60
Chief operators, Class C.....	6. 72
Second and third operators, Class B.....	6. 88
Chief operators, Class B.....	7. 08
Second and third operators, Class A.....	7. 23
Journeymen, linemen, and construction men, apprentices after 36 months.....	7. 56
Chief operators, Class A.....	7. 42
Electrical machinists.....	7. 40
Journeymen metermen.....	7. 56
Incandescent boulevard and electric sign repairmen.....	7. 56
Journeymen cable splicers.....	8. 56
Foremen.....	8. 06
	Per month
Multiple arc lamp trimmers.....	\$140. 00
Mail and money auto truck drivers.....	138. 00
Tool-room men.....	152. 00
Series arc lamp trimmer.....	150. 00
Line patrolmen.....	164. 00
Derrick men.....	161. 00
Garage foremen.....	174. 60
Trouble dispatchers.....	186. 00
Cable testers.....	200. 00
Storage battery men.....	190. 00
Line inspector foremen.....	200. 00
Storekeepers, No. 1.....	190. 00
Storekeepers, No. 2.....	210. 00
Foremen at B and O.....	200. 00
Foremen at G and M.....	215. 00

Ice Cream Workers—Washington, D. C.

THE Ice Cream Workers' Auxiliary to Local 118, Bakers, Washington, D. C., has made an agreement with the ice cream manufacturers of Washington for two years from May 1, 1926, calling for union help only, overtime at time and a half, and a system of arbitration. The other matters of interest are as follows:

Second. Eight hours or less shall constitute a day's work, and the work shall be performed within a period of eight consecutive hours; each member shall be entitled to one-half hour for lunch, which, however, shall not be included in the eight working hours. It is optional for any branch of the department, with the approval of the manager, to work eight hours straight, without any intermission for lunch.

Fourth. Six working-days shall be considered a week, but if any of the men are required to work a seventh day of a week they shall be paid double time of their regular wages for the seventh day's work.

All national holidays shall be paid at the rate of double-time pay.

Fifth. Wages shall be paid every week regularly, and shall be figured by the day, as follows:

All skilled men in any branch of the ice cream manufacturing departments shall not receive less than \$6.25 per day until April 30, 1927, and then \$6.50 until April 30, 1928.

All unskilled men in any branch of the ice cream manufacturing departments shall receive not less than \$4.75 per day until April 30, 1927, and then \$5 per day until April 30, 1928.

Unskilled help in the hardening room shall receive not less than \$5.25 per day until April 30, 1927, and then \$5.50 per day until April 30, 1928.

Sixth. All help employed in the wrapping of bricks, or other goods manufactured which requires wrapping, shall not receive less than \$3.75 per day until April 30, 1927, and then \$4 until April 30, 1928; whenever a worker in any branch of the ice cream manufacturing departments has been classed as a skilled worker and receives pay as such his pay shall not be reduced while he may be temporarily employed on work which is not classed as skilled work.

Seventh. All help employed in the ice cream manufacturing departments, whether regularly or temporarily, shall be required to become affiliated with the union, irrespective of what their work may be. All help employed from March to October, inclusive, shall be considered temporary help.

Eighth. No exception shall be made in the wages of any employee on account of sex. All female help that may be employed shall receive the same rate of wages as stipulated above.

Ninth. Every member of the union shall be entitled to a vacation of 10 days, with pay, after having been employed for one full year or longer, such vacation to be granted by the firm and accepted by the employee during the dull season of the trade. Whenever a member of the union, having agreed to abide by the rules of the organization, has worked in any ice cream plant for one year or longer he or she shall not be discharged without there are good and sufficient reasons for such discharge.

Tenth. Any firm deciding to produce a commodity requiring the services of a baker shall agree to employ members of Local No. 118, Bakery and Confectionery Workers' International Union of America, and comply with the provisions of the agreement of that body. Whenever bakers are employed in any ice cream plant their work shall not be infringed upon by the ice cream workers.

Eleventh. Whenever a firm desires to engage a student for the purpose of developing him for a position of a manager or superintendent of some other ice cream plant he may be permitted to do work of a practical ice cream worker without becoming a member of the union for a term of three months. He is not, however, to take the place of a regularly employed man. Should he be retained in the plant over three months working along with the union men it will then be required that he become a member of the union and be assigned to a regular position. No more than three students shall be permitted in a plant at any one time.

Piano Movers—Chicago

THE piano movers affiliated with Local No. 738 of the International Brotherhood of Teamsters made an agreement with the Furniture, Piano Movers and Expressmen's Association of Chicago, April 1, 1926, in which a closed shop, a weekly pay day, arbitration, and the elimination of all overtime as far as possible are provided for. Other provisions of the agreement follow:

SECTION II, ARTICLE 1. Wages for flat wagons hauling freight from store to depot or from depot to store shall be \$38 per week.

ART. 2. For motor-driven vehicles hauling freight or handling pianos from factory to store or from store to factory or depot, the wages shall be \$47.50 per week.

ART. 3. The wages for chauffeurs on motor-driven trucks shall be \$49 per week. The wages for movers on same shall be \$46 per week. The man in charge of crew and tickets shall receive additional compensation, to be mutually agreed upon between employer and employee, said additional compensation to be not less than \$1 per week.

ART. 4. Any employee coming under the jurisdiction of this agreement shall receive the following holidays, at full pay, as set forth in this agreement: New Year's Day, Decoration Day, Christmas Day, Thanksgiving Day, Independence Day, and Labor Day.

ART. 5. Any member of this union who has been employed continuously by any member of the above association for a period of one year, 52 weeks, shall be entitled to one week vacation with pay; said vacation shall be in the months of July or August. Any member employed for less than one year shall be entitled to one extra day's pay per month for the period of employment, such days not to exceed six days in any one year.

ART. 6. Extra men shall receive not less than one day's pay at the rate of \$7.67 per day. Extra men hired for less than one day shall receive time and one-half per hour. Nothing less than two hours considered.

ART. 7. Working hours shall be from 7.30 a. m. to 5.30 p. m. Chauffeurs to start at 7 a. m., with the understanding that the employees shall have one hour for lunch. Overtime shall be paid at the rate of \$1.30 per hour.

SEC. III, ART. 1. Four men shall constitute a crew on piano trucks; four men on combination players; four men on small grands; six men on concert grands; eight men on concert player grands. Under no consideration shall less than six men handle concert grands.

ART. 2. When employees work on New Year's Day, Decoration Day, Fourth of July, Thanksgiving Day, and Christmas Day they shall be paid at the rate of \$1.75 per hour, nothing less than three hours to be considered, such pay to be in addition to the regular compensation for these holidays, as provided for in Section II, article 4.

ART. 3. When necessary to move pianos on Sundays or holidays the work shall be done by members of 738, International Brotherhood of Teamsters, at double rate.

SEC. IV, ART. 2. The employer agrees to discharge any employee after receiving due notice from an official of this union, providing said union can furnish a substitute. The union agrees to investigate all charges made against members of this union if presented in writing, providing such charges be filed within six days.

SEC. VI, ART. 1. Any employee must make himself generally useful at any work required of him by his employer during working hours providing same does not conflict with any other organization.

SEC. VII, ART. 2. In case of a lockout or a strike of any local union it shall not be considered a violation of this agreement to refuse to work where such controversy is on, but in no case shall there be a sympathetic strike.

Retail Clerks—Anaconda, Mont.

THE retail clerks of Anaconda, Mont., Local No. 1041, made a two-year agreement with the merchants of that city, June 1, 1926, which contains several somewhat unusual clauses. Extracts follow:

RULE 1. Scale for competent salesmen to be not less than \$125 per month. Scale for male apprentices to be not less than \$40 per month for the first six months, \$60 for the second six months, and \$75 per month during the second year; thereafter they shall receive not less than \$125 per month.

Scale for competent salesladies to be not less than \$60 per month. Scale for girl apprentices to be not less than \$35 per month for the first three months, \$45 per month for the next nine months, and \$50 per month the second year. Thereafter they shall not receive less than \$60 per month.

RULE 2. Every clerk, stockman, window dresser, and store employee, if 16 years of age or over, to procure a working card * * * within 30 days after securing employment, if not already a member of this union, and they are not to be allowed to work unless they do so.

RULE 4. No store to employ a married women as a clerk unless the husband is an invalid and the family is dependent upon her for a living.

RULE 5. Any person commencing to work in any store may secure a permit, which entitles the person to work 30 days. At the expiration of 30 days, if working, or immediately upon going to work again, he or she must deposit the

regular initiation fee, and if elected to membership in this union, secure the regular working card.

RULE 6. All stores to be closed on Sundays, New Year's Day, Washington's Birthday, Decoration Day, Fourth of July, Commercial Day, Labor Day, Thanksgiving Day, and Christmas Day.

RULE 7. All stores to be closed between the hours of 6 p. m. and 9 a. m., except the five evenings preceding Christmas, when the closing hour shall be 9 p. m.

RULE 9. The rules concerning hours shall not apply to tobacconists, book-sellers, and the news agents and the stores that handle such goods exclusively. The above stores selling sporting goods, such as fishing tackle, guns and ammunition, baseball and football goods, skates, cutlery, etc., shall not sell any of the above goods only as provided in rules 6 and 7.

RULE 10. The financial secretary-treasurer (or other authorized representative) of the union shall have the privilege to interview employees at any time when such employees are not engaged in waiting on customers, and the employer refusing to allow such representative to interview such employees shall be declared unfair.

RULE 11. Any merchant under the jurisdiction of the union violating the rules of the union shall be declared unfair and shall be fined an amount that shall be decided upon by the majority vote of the members present at any regular meeting.

RULE 12. Should the financial secretary-treasurer or other authorized representative of this union request it, the undersigned merchant agrees to deduct from the wages of clerks who are members eligible to membership in this union any amounts due this union for initiation fees, dues, fines, permit fees, or assessments which the union can not collect, and turn such deductions over to the financial secretary-treasurer of this union.

RULE 13. Any store recognized as a union store by the laws and principles of our union will be entitled to display a store card, providing the proprietor or persons duly authorized to conduct said store shall have signed the above agreement required with the Anaconda Retail Clerks' Union No. 1041.

No firm shall be considered a strictly union house unless all employees eligible to membership in this union are members thereof.

RULE 14. This union may, at its own discretion, issue the store card to small dealers who do not employ clerks but who comply with the above rules.

RULE 15. Commercial Day shall fall on the third Wednesday in August.

RULE 16. Paragraph concerning drug stores to be included in agreement.

Drug stores.—Beginning with the first Sunday in June and ending with the last Sunday in September, the drug stores shall keep no evening hours on Sundays or holidays. The present hours to be in force the balance of the year.

Wage scale as applied in this agreement does not apply to pharmacists, but shall be controlled according to the pharmacy law; that is, a graduate must have two years' experience before he can register, etc.

RULE 17. Party of the second part further agrees, providing he is now engaged in business of selling drugs, commonly called drug store, that he will not sell, barter, or exchange any article commonly dealt in by retail mercantile stores, fireworks included, after the closing hours specified in this agreement, and will be bound by all other provisions of this contract.

Smelter Workers—Punxsutawney, Pa.

AN AGREEMENT was made between the Punxsutawney Furnace Co. and its employees December 3, 1925, in effect from the time the furnace is in blast, including blowing out, taking out coke, and making everything safe. Aside from a clause relating to arbitration the following are the most important sections of the agreement.

Second. The furnace company agrees to pay the hourly rates of wages shown on attached sheet [omitted], and follow such per cent increases or decreases as may be published by the United States Steel Corporation during the life of this agreement.

Third. The furnace will be operated on three-shift basis, and eight hours shall constitute a day's work, but, when necessary, any employee may be required to work overtime at same rate per hour.

Fourth. Working conditions to remain the same as they were during the last blast. It is understood that the plant is to operate on open-shop basis, the furnace company to have the right to hire whom they please. The foreman's right to discharge any employee for just cause is recognized.

Fifth. Promotion of employees in any department shall be governed by seniority and ability, the foreman and employees' committee to decide. It is understood that mechanical and other departments are to be separate.

Sixth. All vacancies to be advertised for three days, and the oldest employee bidding in that department to get the position, according to clause 5.

Street Railways—Wheeling, W. Va.

A THREE-YEAR agreement was signed between the Wheeling Traction Co. and its employees, members of Division No. 103 of the Almagamated Association of Street and Electric Railway Employees, April 19, 1926, effective May 1.

Some of the most important sections read as follows:

The company, through its properly accredited officers, will treat with its employees and the properly accredited officers or committees of the association upon all matters covered by this agreement.

Such committee representing the association shall consist of not more than six employees of the company, including the president of Local No. 103, and in addition one international executive board member.

That the properly accredited officers or committee of the association shall have full power to adjust all differences that may arise between the parties hereto with the properly accredited officers of the company, and all differences, except those expressly stated herein, shall be submitted to the company by the properly accredited officers of the association, and if an agreement can not be reached the entire matter shall be submitted to the general manager of the company, and should he be unable to adjust the differences at issue the same shall be submitted to a board of arbitration within 10 days after failure to adjust such differences. The arbitration board shall meet in continuous sessions until decision is reached.

The board of arbitration shall consist of three disinterested parties, as follows: One to be selected by the company, one to be selected by the association, and the two so selected to select the third: *Provided further*, That should the arbitrators so appointed by each of the parties to this agreement fail to agree within a period of five days upon the third arbitrator, then the officers of the company and the officers of the association with the two arbitrators selected shall meet and see if it is possible to agree upon a third arbitrator, or make such arrangements concerning the arbitration as they may deem advisable.

SECTION 1. This agreement shall apply to persons in the employ of the company working as motormen, conductors, trainmen's helpers, or shop and barn employees, automobile mechanics and helpers, and such employees must, if eligible to membership therein, become members of the association within at least 60 days after formally starting to work for the company, its successors, lessees, or assigns.

Rules governing bus operators: The company will assign men who are holding road seniority to bus-operating jobs, provided, in their judgment, they have men who can qualify for such positions, but in the event they have not they have the right to hire bus operators from the outside. Any employee taking a position as a bus driver and later desires to go back to his place on the cars will retain his seniority.

It is agreed that the company shall have the right, at its discretion, to dismiss any employees working under this agreement within the period of 60 days after their employment without such dismissal constituting a grievance.

SEC. 2. Any member of the association in the employ of the company (except those expressly stated herein) suspended or discharged from the service of the company shall have a notification of the charges for which they have been suspended or discharged within 48 hours after said action by the company; if after a complete and thorough investigation of said charges by the accredited representatives of the company and of the association it is found that they are not guilty

of sufficient cause to warrant such action on the part of the company they shall be reinstated to their former position and seniority rights, with compensation as provided for in this agreement for such of the time they lost through the unwarranted action of the company as may be determined equitable by said board of arbitration.

SEC. 3. Any offense charged against a member of the association by the company must be notified to such member within 10 days after the date the offense was committed and has been brought to the company's attention. In no case, however, shall a longer period than 30 days elapse. Such members shall acknowledge such notification by attaching their signature to the report or other papers which stated the occurrence in which the offense arose. Failure on the part of the company to present the charges within the specified time annuls the offense, but this provision shall in no way affect the records of the company made up prior to May 1, 1918, and, further, shall not affect the official records made up during the life of the contracts running from May 1, 1918, to April 30, 1929.

SEC. 4. The penalty for trainmen failing to report at time specified by the company he shall be sharked to the foot of the extra list, and shall serve this penalty on the day subsequent to the day of the shark. The penalties shall be one day for first offense, two days for second offense, and three days for third offense, within 30 days. Any trainman failing to report at the time specified by the company, if he reports in person or by phone within two hours of the above time, will be subject to be assigned to such work or on the extra board as the dispatcher may deem advisable.

Such reporting or working shall cancel one day of his shark, but shall not cancel the record of the shark. If the failure to report for duty is due to intention or indifference it shall be subject to such discipline as shall be reasonable in the circumstances.

SEC. 7. The basis of operation for motormen and conductors shall be nine hours for a day's work. All regular passenger runs shall as far as practicable consist of early and late straights and shall be paid straight time for the time actually consumed by the run, but not less than a nine-hour day on week days. On Sundays this provision for a minimum of nine hours shall not apply. The time of all regular runs shall be divided as nearly equal as practicable.

Time and one-half shall be paid to any motorman or conductor holding or working a regular passenger car run for time in excess of 30 minutes over the scheduled time of such run: *Provided, however, That any motorman or conductor holding a regular passenger car run, including an extra man working a regular passenger run, is called upon to do work in addition to that constituted in such run, he shall be paid overtime for such work.*

Any motorman or conductor holding or working a swing passenger car run shall be subject to work other than that constituted in such swing run without overtime pay for such additional work until 10 hours of work shall have actually been performed. All work in excess of 10 hours shall be paid for at time and one-half. Or, in other words, overtime is to be paid for all work in excess of 10 hours, including swings that call for more than 10 hours as the regular run.

SEC. 9. It is agreed by the company that dues collectors of the association shall have the privilege of collecting dues from the members of the association inside the barns and the employees' private rooms but not on the cars of the company while on regular or extra runs or while on duty.

SEC. 11. Seats shall be provided for motormen and conductors and all cars shall be fully equipped by the company before being taken out of the barn for runs.

SEC. 12. Employees shall be given free and unlimited transportation on regular passenger cars at all times and on all lines owned by the company.

SEC. 13. All badges and punches necessary for the employees must be supplied by the company. A reasonable deposit, to be fixed by the company, shall be made by the employee upon issuing, and such deposit will bear interest at 4 per cent if held as a deposit of one year or more, but not prior to May 1, 1918.

SEC. 14. Any employee of the company promoted from a position of trainman desiring to return to his former position may be placed in the same position as to seniority which he held before the time of promotion. Any member of the association assigned to duties of the aforesaid association shall return to their respective position or place on the board on their return to the position held prior to said promotion or assignment.

It is agreed that the officers and the committee of the association, as provided for herein, consisting of not more than six of the company's employees,

shall be granted leave of absence on such days as are necessary to enable them to attend to the duties of the association or to carry on negotiations of any kind with any of the officials of the company.

SEC. 15. Seniority of service of motormen and conductors is to be recognized at all car barns. In the event there is a run taken off the board shall be thrown open: *Provided, however,* That if the run or runs taken off shall be held by the youngest crew or crews the board will not be thrown open. A run added will be advertised the same as a vacancy. In the case of a change in schedule of one or more runs that may inconvenience crew or crews the board may be thrown open at the car barn where such run or runs originate for pick. All runs permanently vacant shall be advertised and moved up to be effective the first or the 16th day of the month.

In the event a run is taken off, a run added, or a change made in the schedule in any one or more runs, the board shall be thrown open at that car barn for a pick according to age in service. All runs vacant shall be advertised and moved up within 10 days from the time the vacancy occurs. In the event that any trainman may be off with sickness or otherwise for a period or more than 10 days a temporary move-up shall be made. The above provision to apply at McMechen barn and Pan Handle division cars working out of the Warwood barn: *Provided, further,* That there shall be an annual pick of runs at all operating barns of the company the first day in June: *And provided further,* That if the board has been open 90 days previous to June 1 this paragraph shall not apply.

SEC. 16-a. It is hereby agreed that motormen and conductors on snow sweepers shall receive 5 cents per hour in addition to their regular rate for the time they may actually be required for such work.

SEC. 16-b. Motormen or conductors on freight-car runs shall receive not less than 6 cents per hour in addition to their regular passenger rate. Freight-car helpers shall receive 47 cents per hour for the first three months, 50 cents per hour for the next nine months, and 55 cents per hour thereafter, and shall be subject to the same working conditions as motormen and conductors holding such runs.

SEC. 16-c. Motormen or conductors on regular service car runs shall receive not less than 4 cents per hour in addition to their regular passenger car rate.

SEC. 17. Motormen and conductors when acting as instructors of student motormen and conductors shall receive 5 cents per hour in addition to their regular passenger car wage.

SEC. 18. Trainmen shall receive pay at their regular straight time wage rate for making out accident reports. A minimum of 15 minutes and a maximum of 30 minutes' time shall apply to the pay of all men making out these reports. If more time is necessary, application shall be made to the superintendent or dispatcher.

SEC. 20. It is further agreed that the company will provide workmen's compensation protection for members of the association in its employ to the extent of its ability to do so under the laws of West Virginia and Ohio or the equivalent thereof.

SEC. 21. The wages for all motormen and conductors in passenger service and bus operators shall be as follows during the year ending April 30, 1927:

First three months of employment, 49 cents per hour; next nine months of employment, 52 cents per hour; thereafter, 57 cents per hour. One-man car operators shall be allowed 5 cents more per hour.

SEC. 22. The recognized holidays applying to all sections of this agreement shall be as follows: January 1, May 30, July 4, Labor Day, Armistice Day, and December 25, or days set apart for the observance of same.

SEC. 23. Nine hours shall constitute a day's work for all shop and barn employees, except where otherwise agreed by company and association.

SEC. 24. In making promotions consideration shall be given to fitness and ability: *Provided, however,* That in all cases where two or more men possess equal qualifications, seniority of service shall rule.

SEC. 25. All shop or barn employees shall be privileged to buy and own their own tools. If any employee choose to do so, the company shall within 30 days after employment furnish such employee with tools, which, in the company's judgment, shall correspond with his line of work, which may be charged to said employee by the company. In case any tool is defective or broken while in the use of the company's service it shall be turned over to the proper official of the company and a new one shall be issued for same. No employee shall be forced to receive company's tools if he does not wish to do so, but if he does not choose to receive the company's tools he must provide suitable tools of his own. All

employees, upon leaving the service, shall return to the company the tools accepted from the company, and in case any tool is missing they shall make proper compensation for same. No charge will be made for socket or box wrenches.

The company further agrees to replace any tools that are worn out or broken in the service of the company, provided that such tools or tool shall in a reasonable measure correspond to the company's standard tools.

SEC. 26. Fifteen minutes may be taken for lunch by the day or night forces at any car barn at such time as may be agreed upon by the association and the company. This time shall not be paid for. Ten minutes shall be given each shop and barn employee at the close of their day's work to put their tools away and prepare to go home.

SEC. 27. Time and one-half shall be paid shop and barn employees for all overtime and holidays. Shop or barn employees shall be paid 5 cents per hour in addition to their regular rate for such time as they may be actually required to work on snow sweepers while such snow sweepers are in use on the company's lines outside of its barns or shops.

Shop and barn employees who are members of the association will be allowed one day off per week, if desired, except in cases of extreme emergency. He shall notify his foreman at least one day previous. The company to pay no portion of such time.

SEC. 28. The shop and barn employees of the company to be classified as follows:

Painters:	Cents per hour
Class A	62
Class B	55
Blacksmiths	56 to 65
Repairmen:	
Class A	59
Class B	54
Helpers in shop and barn department	42 to 53
Apprentices, errand boys, etc	25 to 30
Watchmen and janitors	30
Car cleaners and sanders	34 to 38

The company shall have the right to pay any barn or shop employee any rate higher than the highest rate in his group than those provided for in this agreement that may in the judgment of the company, seem proper.

SEC. 29. That if any member of the association, by word or act, shall interfere with or disturb the course of negotiations between the properly accredited officers of the company and the association, respectively, upon any subject whatsoever, or interfere with or disturb the company's service in any way, contrary to the conditions and spirit of this agreement, such member or members shall, upon reasonable proof of the same, be dismissed from the company's service. This section does not apply to any member working under instructions of the association.

SEC. 30. All motormen and conductors in the employ of the company on and after May 1, 1921, after two years of continuous service and for any reason leaves the employ of the company who may be reemployed within two years thereafter, shall receive the prevailing rate of wage for the first two months of service and then be rated according to the actual number of years of previous service. Seniority to date at the time of reemployment.

AWARDS AND DECISIONS

Clothing Industry—Toronto

THE board of arbitration in Toronto rendered a decision August 6, 1926 (No. 40), in which its position relative to the way firms and the union should treat each other was stated, as follows:

The association complained of a stoppage, arising from the employment of a cutter after the union had failed to supply one. High words had passed between the employer and an official of the union, after which the union called out the entire shop.

After hearing evidence and argument the board considered the matter and issued the following unanimous judgment:

This case reveals certain things to which one would specially direct attention:

1. That firms should carry their dealings to the manager of the association rather than attempt to reach a final settlement in difficult cases directly with the union.

2. That the way is open to bring any employer or any worker before this board on a charge of using abusive or violent language. This is the proper procedure; any illegal or violent action in reprisal is simply repeating the offense.

3. That the agreement forbids workers visiting other shops than their own or transacting union business among themselves during working hours.

4. That the agreement allows an employer to ask for new workers when needed, and in case of the union failing to fulfil his request within 48 hours he may secure them as he pleases. If the union has any complaint to make it should proceed through the regular channels.

5. As regards the stoppage, we keep in mind that this firm has been but a short time in the association, and that the orders of the union calling the people out were given impulsively and without premeditation. We believe that the officials of the union are opposed to stoppages, and are confident that they will not repeat this offense. We feel that they must be censured for doing something which, whatever the provocation, was a direct violation of one of the most vital regulations of the agreement. We order the workers to return at once to work.

Railroads—Decisions of Train Service Boards of Adjustment

Eastern Region

THE Train Service Board of Adjustment for the Eastern Region rendered a decision in Docket No. 347, July 1, 1926, relative to overtime work. September 3, 1925, an engineer and fireman employed on the shift working from 4 p. m. to midnight at the Rochester passenger station of the New York Central Railroad were required to work with the train crew on the succeeding shift from midnight to 1.10 a. m., on account of the failure of the relief engine and crew to report at midnight. The relief engine and crew had been delayed by a disabled engine. The engineer and fireman were paid one hour and ten minutes' overtime for service while waiting for the relief engine and crew. They made claim, however, for an additional day's pay at time and a half.

The position of the committee was as follows:

Decision of the commission of eight, reaffirmed by Board of Adjustment No. 1 in various decisions, provided that yardmen working with an engine or crew on a succeeding or following shift would be considered as starting a new day. Question 90 and decisions thereto in Interpretation No. 1 to Supplement No. 24, provides that crews working on a second shift within a 24-hour period would be paid 8 hours or time and one-half.

In this claim the management has taken the position that the agreed-upon understanding known as "Memorandum D" covers this claim. We do not agree that this memorandum covers this case or that it was ever intended to cover cases of this nature. At the time this memorandum was agreed upon it was distinctly understood to apply in cases where the relief engineer or fireman was late in reporting or who failed to report at the proper time, and it so clearly provides, as, "when the engineer, fireman, or helper who should relieve them on succeeding trick fails to report at the fixed starting time." This is further emphasized by: "For the additional time necessary to obtain an extra man who will be called when available, the additional time not to exceed the time of the calling arrangements provided by rules or practices under the several schedules and to be calculated from the time the vacancy becomes known by the management."

In this case there was no vacancy, no failure of the relieving crew to report at the fixed starting time. The relieving crew reported at the fixed starting time at the engine house, which time was so fixed by the management so that the crew would arrive at the changing point in the station at the relieving time at midnight. We contend that the time as claimed by Engineman K and Fireman B was proper and in accordance with the decisions previously referred to in cases where a second assignment was started.

Position of management.—The management holds Engineman K and Fireman B were paid strictly in accordance with the understanding agreed to between the management and committee representing the engineers and firemen, known as Memorandum D, reading as follows:

"Yard engineers, firemen, or helpers will be allowed actual time at overtime rates for continuing on duty on the succeeding trick when the engineer, fireman, or helper who should relieve them on such succeeding trick fails to report at the fixed starting time, for the additional time necessary to obtain an extra man who will be called when available, the additional time not to exceed the time of the calling arrangement provided by the rule or practice under the schedule and to be calculated from the time the vacancy becomes known by the management."

Engineman K and Fireman B's relief failed to report at the relief point on account of conditions beyond the control of the management, and as a result Engineman K and Fireman B were required to work until 1.10 a. m., or one hour and ten minutes overtime.

Our understanding of Memorandum D is that it covers such cases as this as well as cases where engineers or firemen fail to report because of delay in getting to their reporting point. Therefore, the management holds there is no justification for the claim for another day at time and one-half.

Decision.—Under the language of Memorandum D, the claim is sustained.

Southeastern Region

A CASE to some extent similar to the preceding one was considered by the Train Service Board of Adjustment for the Southeastern Region, in Docket 218, June 22, 1926.

On August 27, 1923, a yard foreman and crew at the Portsmouth yard of the Norfolk & Western Railway regularly assigned between the hours of 6.30 a. m. and 2.30 p. m. had the brake rigging of their engine come down at 2.20 p. m. By direction of the terminal trainmaster the foreman obtained a new engine at 2.52 p. m. In the meantime the succeeding crew had also secured a new engine and were completing the work being done by the first crew when the engine broke down. Thereupon the first foreman and crew were instructed at 3.10 p. m. "to get a cut of slum cars out of No. 5 flat yard and take to west end of east yard and put them away." They were relieved at 4.20 p. m., and were paid for one yard day's work and two hours' overtime. Claim was made for an additional yard day at time and one-half for the two hours' overtime worked.

Position of committee.—The claim of the committee is that Foreman B. and crew should have been paid one day at overtime rates for the service performed after their engine broke down because new work was assigned to them after their regular period of assignment had expired and the succeeding shift had reported and were working. The service performed could not be called emergency work, as the cut of slum cars consisted mostly of empty foreign box cars which were not finally disposed of or delivered until the following morning.

The position of the committee is based upon the decisions of the commission of eight, numerous decisions of Board of Adjustment No. 1, particularly in Case No. 1658, and Decision No. 2 of the United States Railroad Labor Board, which says in part: "The board assumes as the basis of this decision the continuance in full force and effect of the rules, working conditions, and agreements in force under the authority of the United States Railroad Administration. Pending the presentation, continuation or modification of such rules, conditions, and agreements, no changes therein shall be made except by agreement between the

carrier and employees concerned. * * * The committee also wishes to call attention to the last paragraph of the agreement at present in effect between the Norfolk & Western Railway and its trainmen, which is as follows: "It is understood and agreed that the provisions of General Order 27 and supplements 16 and 25 thereto, including interpretations thereon not otherwise specifically mentioned in this agreement and applicable thereto, shall be recognized as a binding part of this agreement."

Position of management.—It is the position of the management that the allowance of one yard day and two hours' overtime to this crew for the service in question was strictly in accord with the regulations and that the claim of the committee for an additional day of eight hours at the rate of time and one-half for the two hours' overtime worked by this crew was properly declined.

In pressing this claim the committee contended that the two hours' overtime worked by this crew was new work and that an additional day at time and one-half should therefore have been allowed in accordance with the rulings of the commission of eight. We maintain that the allowance made for the service performed was strictly in accord with the existing schedule provisions. Furthermore, we hold that the commission of eight rulings referred to by the committee are not in effect on this road but that they have been superseded by special provisions of the existing schedule and with the intent of superseding such rules.

Decision.—After giving full consideration to written and oral evidence submitted in this case, the board is unable to agree on a decision, and the parties interested are so advised, and the docket is closed.

Another somewhat similar case was Docket 220, handled the same day. A switchtender in the Corbin yard of the Louisville & Nashville Railroad regularly assigned from 3 to 11 p. m. was obliged to continue on duty one night till 12.15 a. m., due to the nonarrival of the third shift man because of a misunderstanding between him and the yard dispatcher. He was paid for 1 hour and 15 minutes' overtime, but he demanded pay for an additional 8 hours at time and a half.

Position of committee.—Reference is made to article 35 of the agreement, reading as follows:

"Except where exercising seniority rights from one assignment to another, or when extra men start a second shift within a 24-hour period (except extra men required to remain on duty in excess of 8 hours in continuous service), all time worked in excess of 8 hours' continuous service in a 24-hour period shall be paid for as overtime, on the minute basis, at one and one-half times the hourly rate."

Our position that H. is entitled to a minimum of 8 hours at the punitive rate is sustained by Decisions 83, 238, 379, 1070, 1278, and 2067 of the Board of Adjustment No. 1. Also by decision of management on cases where regular men were required to start a second shift within a 24-hour period.

Position of management.—The company contends that Switchtender H. was paid strictly in accordance with article 35, quoted by the committee.

The company further contends that decisions of Railway Board of Adjustment No. 1, referred to by the committee, are based on the so-called unit rule with respect to yard crews, promulgated by the commission of eight and continued in effect by supplements 16 and 25. It is not the understanding of the company that this so-called unit rule was intended to apply to switchtenders, nor do we know of any ruling or precedent where it has been applied to that class; neither has the management any knowledge of having allowed similar claims of switchtenders.

In this case, also, the board failed to reach a decision.

Western Region

Continuous Service

THE question of the rate to apply for 16-hour continuous service was raised in Decision No. 1914 of the Train Service Board of Adjustment for the Western Region, April 8, 1926.

Due to the fact that there were no firemen on the extra board qualified to perform the duties of hostler, a fireman regularly assigned to chain-gang freight service at Slaton, Tex., was detailed to fill a vacancy as hostler from 4 p. m. to midnight November 9, 1924, and continued from midnight to 8 a. m. the next morning, relieving the third-trick hostler who was absent on account of sickness. For this service he was allowed two days' pay at the prescribed hostler's rate.

The committee's position was that he should have been paid at overtime rates for the second shift worked.

In view of the fact that Fireman E. was not an extra man, but instead was a regularly assigned freight fireman, it was absolutely necessary that he be called for service on the first shift, as we understand no extra firemen with the necessary qualifications were available and there were no other hostlers available. It was not necessary that he be used on the second shift, as there was a hostler available for the service.

Article II, paragraph (c), of our Hostler Rules, reads as follows:

"Except when changing off where it is the practice to work alternately days and nights for certain periods, working through two shifts to change off, or where exercising seniority rights from one assignment to another, or where extra men are required by schedule rules to be used, all time worked in excess of 8 hours' continuous service in a 24-hour period shall be paid for as overtime, on the minute basis, at one and one-half times the hourly rate. This rule effective April 10, 1919."

Position of management.—For the services rendered by Fireman E., as outlined in the joint statement of facts, the carrier takes the position that proper compensation has been allowed as provided in paragraph (c), Article II, of the hostlers' agreement, quoted in the position of the committee. Attention is directed to "where extra men are required by schedule rules to be used," permitting the carrier to work extra men through two shifts without penalty. As evidence that extra men are required by schedule rule to protect vacancies as hostlers, the last portion of paragraph (a), rule 3, appearing under Article III of the hostlers' agreement is quoted below:

"Where no extra board is maintained vacancies of 15 days or less may be protected with other than firemen. When firemen are called to protect extra hostling service first firemen on extra board having the qualifications as specified in rule 4 will be called, for which service he will receive the hostling rate."

There is a firemen's extra board maintained at Slaton; therefore, the latter part of the rule quoted applied, making it imperative that the carrier use an extra fireman to fill hostler vacancies. However, at the time the vacancies existed there were no firemen on the extra board qualified to perform the duties of a hostler under rule 4, Article III, which reads as follows:

"Firemen shall have had at least one year's experience as a fireman or three months' previous experience as a hostler before being permitted to act as hostler."

After it developed that no qualified firemen were available on the extra board it was necessary to call a regularly assigned man, and it is our contention that in so doing the schedule rules were adhered to, and that when Fireman E. was called he became an extra hostler and would be governed by the rules regulating the use of extra hostlers. It is our further contention that when it became necessary to have a man to fill the second vacancy, being required by schedule rule to fill hostler vacancies with extra men at points where extra boards are maintained, it was proper to use the available qualified extra man, who in this instance was Fireman E., as there was not at the time of the second vacancy a qualified fireman on the extra board. The committee contends that to fill the second vacancy there was a regular hostler available, but he was assigned to work from 8 a. m. to 4 p. m., and could not be used as long as firemen are available. By the handling given, the carrier feels that Fireman E. was justly compensated by allowing two days of eight hours each for filling the vacancies of two hostlers who, through sickness and other causes, were compelled to be absent from duty.

Decision.—In view of the facts as presented in this case, claim is sustained.

Wages

A claim of a switchman for a day's pay at helper's rate was considered by the same Train Service Board of Adjustment in Decision No. 1966, May 26, 1926.

Position of committee.—March 23, 1925, Switchman J. D. G., employed in Alamosa yard, was called for 11 p. m.; reported for work at the roundhouse; rode the engine from that point to yard master's office at freight house, and was released from duty at 11.20 p. m. The organizations contend that Switchman G. is entitled to one day's pay under article 2 of the yardmen's schedule, reading "Eight hours or less shall constitute a day's work." The organizations contend that Switchman G. was on duty from 11 p. m. to 11.20 p. m. and is entitled to one day's pay under the above-quoted article of the schedule.

Position of management.—This is a case where on account of an error two extra switchmen were called where only one was needed. The investigation developed that all four men reported for the engine at the switch shanty, and in order to settle the question as to who should work all four of the men rode the engine to the yard office. The yardmaster, finding that an error had been made, released Yardman G. We have no call and release rule with the yardmen. Settlement by payment of one-half day was offered, on the basis of a call and not used, but was refused by the representatives of the employees.

Decision.—Claim sustained.

IMMIGRATION

Statistics of Immigration for July, 1926

By J. J. KUNNA, CHIEF STATISTICIAN U. S. BUREAU OF IMMIGRATION

IN July, the first month of the new fiscal year, 38,379 aliens entered the United States. Of this number 22,283 were immigrants seeking permanent residence in this country and 16,096 were classified as nonimmigrants—visitors to this country or returning residents. Alien departures this month numbered 25,022, comprising 7,052 emigrants and 17,970 nonemigrants. As usual during the months of June and July, when the vacation exodus to Europe is at its peak, a large number of Americans left the country for a trip abroad, 47,715 United States citizens departing in June and 60,223 in July, the majority of these going via the port of New York. The latter month also saw the return of many of these tourists, the statistics for July, 1926, showing 25,981 citizens having arrived that month.

There was a slight increase in the number of aliens debarred from entering the United States in July, as compared with the monthly average for the past fiscal year. Failure to present proper immigration visa continues to be the principal cause of rejection; of the 1,746 aliens debarred for all causes during the month, 938 were turned back at the land border stations and 298 at the seaports for this reason. During the same month 816 aliens were deported from the United States after landing, and over one-half of these entered surreptitiously, mostly over the Canadian border or from south of the Rio Grande.

Canada, with 7,239, and Mexico, with 5,726, were the principal contributors of immigrant aliens in July, 1926, while of the European countries Germany sent the largest number of this class (1,623). The Irish Free State sent 1,612; Great Britain, 1,300; and Italy, 1,160. Comparatively few came from each of the other countries.

Of the 38,379 aliens admitted during July last 14,517 came in under the immigration act of 1924 as natives of nonquota countries, 7,233 as immigrants charged to the quota, and 5,965 as former residents of the United States. Aliens admitted for business or pleasure numbered 5,754, and 2,425 were in continuous passage through the country. There were also admitted this month 647 wives and 399 children of United States citizens, 495 Government officials, and 148 students. Among the other classes entering the country in July there were 461 veterans of the World War and their wives and children.

TABLE 1.—INWARD AND OUTWARD PASSENGER MOVEMENT DURING THE FISCAL YEAR ENDED JUNE 30, 1926, AND DURING THE MONTH OF JULY, 1926

Period	Inward					Aliens de- barred from enter- ing ¹	Outward					Aliens de- ported after land- ing ¹
	Aliens admitted			United States citi- zens ar- rived	Total		Aliens departed			United States citi- zens de- parted	Total	
	Immi- grant	Non-immi- grant	Total				Emi- grant	Non-em- igrant	Total			
Fiscal year ended June 30, 1926-----	304,488	191,618	496,106	370,757	866,863	20,550	76,992	150,763	227,755	372,480	600,235	10,904
July, 1926-----	22,283	16,096	38,379	25,081	64,360	1,746	7,052	17,970	25,022	60,223	85,245	816

¹ These aliens are not included among arrivals, as they were not permitted to enter the United States.

² These aliens are included among aliens departed, they having entered the United States, legally or illegally, and later being deported.

TABLE 2.—IMMIGRANT ALIENS ADMITTED TO AND EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING THE FISCAL YEAR ENDED JUNE 30, 1926, AND DURING THE MONTH OF JULY, 1926, BY RACE OR PEOPLE, SEX, AND AGE GROUP

Race or people	Immigrant		Emigrant	
	Fiscal year, 1926	July, 1926	Fiscal year, 1926	July, 1926
African (black).....	894	78	865	75
Armenian.....	741	74	90	7
Bohemian and Moravian (Czech).....	2,494	207	1,468	172
Bulgarian, Serbian, and Montenegrin.....	532	62	1,681	177
Chinese.....	1,375	118	2,873	263
Croatian and Slovenian.....	692	46	592	44
Cuban.....	1,476	226	1,287	66
Dalmatian, Bosnian, and Herzegovinian.....	75	4	545	56
Dutch and Flemish.....	3,156	191	993	113
East Indian.....	50	3	69	5
English.....	44,206	3,397	6,935	816
Finnish.....	674	44	560	71
French.....	22,237	1,611	1,277	215
German.....	58,675	2,124	4,509	439
Greek.....	1,385	136	5,188	421
Hebrew.....	10,267	546	341	23
Irish.....	42,475	3,086	1,225	293
Italian (north).....	1,486	190	3,036	319
Italian (south).....	7,888	1,047	16,968	1,092
Japanese.....	598	69	1,201	44
Korean.....	52	6	27	1
Lithuanian.....	393	20	439	45
Magyar.....	1,076	59	1,063	83
Mexican.....	42,638	5,641	3,158	256
Pacific Islander.....	2	1	1	4
Polish.....	3,175	179	2,823	334
Portuguese.....	793	63	2,989	159
Rumanian.....	319	23	1,302	167
Russian.....	938	71	581	56
Ruthenian (Russniak).....	505	48	65	1
Scandinavian (Norwegians, Danes, and Swedes).....	19,418	540	4,188	305
Scotch.....	27,298	1,793	1,912	344
Slovak.....	534	31	850	41
Spanish.....	609	66	2,972	250
Spanish American.....	2,519	289	1,404	156
Syrian.....	488	73	260	23
Turkish.....	197	6	201	20
Welsh.....	1,314	70	76	77
West Indian (except Cuban).....	373	23	660	77
Other peoples.....	381	23	318	19
Total.....	304,488	22,283	76,992	7,052
Male.....	170,567	13,197	54,989	4,288
Female.....	133,921	9,086	22,003	2,764
Under 16 years.....	47,347	3,521	3,347	297
16 to 44 years.....	228,527	16,482	57,986	5,110
45 years and over.....	28,614	2,280	15,659	1,615

TABLE 3.—LAST PERMANENT RESIDENCE OF IMMIGRANT ALIENS ADMITTED TO AND FUTURE PERMANENT RESIDENCE OF EMIGRANT ALIENS DEPARTED FROM THE UNITED STATES DURING THE FISCAL YEAR ENDED JUNE 30, 1926, AND DURING THE MONTH OF JULY, 1926, BY COUNTRY

[Residence for a year or more is regarded as permanent residence]

Country	Immigrant		Emigrant	
	Fiscal year, 1926	July, 1926	Fiscal year, 1926	July, 1926
Albania.....	158	10	314	19
Austria.....	1, 102	44	487	60
Belgium.....	718	36	491	61
Bulgaria.....	175	22	88	17
Czechoslovakia.....	2, 953	237	2, 301	215
Danzig, Free City of.....	210	7	1	
Denmark.....	2, 549	115	691	64
Estonia.....	132	8	15	3
Finland.....	491	26	519	64
France, including Corsica.....	4, 181	203	1, 011	184
Germany.....	50, 421	1, 623	3, 908	403
Great Britain and Northern Ireland:				
England.....	10, 599	574	4, 921	689
Northern Ireland.....	419	11	208	82
Scotland.....	13, 061	663	1, 332	287
Wales.....	1, 268	63	37	
Greece.....	1, 121	129	5, 164	419
Hungary.....	906	49	871	76
Irish Free State.....	24, 478	1, 612	851	182
Italy, including Sicily and Sardinia.....	8, 253	1, 160	19, 980	1, 412
Latvia.....	298	12	58	1
Lithuania.....	636	33	408	42
Luxemburg.....	127	3	7	
Netherlands.....	1, 753	116	379	48
Norway.....	5, 756	97	2, 087	109
Poland.....	7, 126	398	2, 881	334
Portugal, including Azores, Cape Verde, and Maderia Islands.....	666	39	2, 926	158
Rumania.....	1, 211	46	1, 404	168
Russia.....	1, 766	45	181	25
Spain, including Canary and Balearic Islands.....	326	48	2, 465	179
Sweden.....	8, 513	169	1, 150	123
Switzerland.....	1, 994	143	486	68
Turkey in Europe.....	210	20	30	2
Yugoslavia.....	1, 059	97	2, 342	213
Other Europe.....	326	27	46	1
Total, Europe.....	155, 562	7, 885	60, 040	5, 708
Armenia.....	16		43	3
China.....	1, 751	148	2, 989	268
India.....	93	5	113	15
Japan.....	654	80	1, 208	47
Palestine.....	250	31	173	17
Persia.....	56		27	2
Syria.....	429	69	208	14
Turkey in Asia.....	21	12	126	12
Other Asia.....	143	16	44	2
Total, Asia.....	3, 413	361	4, 931	390
Canada.....	91, 019	7, 239	2, 173	81
Newfoundland.....	2, 349	214	283	49
Mexico.....	43, 316	5, 726	3, 198	261
Cuba.....	2, 281	310	1, 922	139
Other West Indies.....	941	49	1, 917	191
British Honduras.....	39	4	45	
Other Central America.....	1, 335	141	521	72
Brazil.....	877	60	210	10
Other South America.....	2, 230	203	1, 215	86
Other America.....	6		1	
Total, America.....	144, 393	13, 946	11, 485	889
Egypt.....	214	15	38	3
Other Africa.....	315	30	88	8
Australia.....	376	34	257	34
New Zealand.....	180	9	134	15
Other Pacific islands.....	35	3	19	15
Total, others.....	1, 120	91	536	75
Grand total, all countries.....	304, 488	22, 283	76, 992	7, 052

TABLE 4.—ALIENS ADMITTED TO THE UNITED STATES UNDER THE IMMIGRATION ACT OF 1924 DURING THE MONTH OF JULY, 1926, BY COUNTRY OR AREA OF BIRTH

[Quota immigrant aliens are charged to the quota; nonimmigrant and nonquota immigrant aliens are not charged to the quota]

Country or area of birth	Annual quota	Admitted during July, 1926		
		Quota immigrant	Nonimmigrant and nonquota immigrant	Total
Albania.....	100	8	62	70
Andorra.....	100			
Austria.....	785	30	84	114
Belgium.....	1 512	21	88	109
Bulgaria.....	100	19	20	39
Czechoslovakia.....	3, 073	239	237	476
Danzig, Free City of.....	228	11	15	26
Denmark.....	1 2, 789	117	130	247
Esthonia.....	124	6	9	15
Finland.....	471	30	47	77
France.....	1 3, 954	178	357	535
Germany.....	51, 227	1, 687	948	2, 635
Great Britain and Northern Ireland:				
England.....		722	2, 052	2, 774
Northern Ireland.....		32	54	86
Scotland.....	1 34, 007	719	773	1, 492
Wales.....		68	75	143
Greece.....	100	17	278	285
Hungary.....	473	18	106	124
Iceland.....	100	6	2	8
Irish Free State.....	28, 567	1, 840	293	2, 133
Italy.....	1 3, 845	278	2, 555	2, 833
Latvia.....	142	7	24	31
Liechtenstein.....	100	3		3
Lithuania.....	344	15	57	72
Luxemburg.....	100		6	6
Monaco.....	100			
Netherlands.....	1 1, 648	97	162	259
Norway.....	6, 453	111	167	278
Poland.....	5, 982	222	422	644
Portugal.....	1 503	23	255	278
Rumania.....	603	29	112	141
Russia.....	1 2, 248	69	277	346
San Marino.....	100	16		16
Spain.....	1 131	21	460	481
Sweden.....	9, 561	208	175	383
Switzerland.....	2, 081	130	162	292
Turkey in Europe.....	100	3	114	117
Yugoslavia.....	671	50	178	228
Other Europe.....	(1)	9	7	16
Total, Europe.....	1 161, 422	7, 059	10, 763	17, 822
Afghanistan.....	100	1		1
Arabia.....	100			
Armenia.....	124	1	5	6
Bhutan.....	100			
China.....	100	11	1, 106	1, 117
India.....	100	11	50	61
Iraq (Mesopotamia).....	100	9	3	12
Japan.....	100	2	744	746
Muscat.....	100		2	2
Nepal.....	100			
Palestine.....	100	13	20	33
Persia.....	100	2	10	12
Siam.....	100		3	3
Syria.....	100	30	74	104
Turkey in Asia.....	(1)	5	56	61
Other Asia.....	(1)	14	18	32
Total, Asia.....	1, 424	99	2, 091	2, 190

¹ Annual quota for colonies, dependences, or protectorates in Other Europe, Other Asia, Other Africa, Other Pacific, and in America is included with the annual quota for the European country to which they belong. Quota for Turkey in Asia is included with that for Turkey in Europe.

TABLE 4.—ALIENS ADMITTED TO THE UNITED STATES UNDER THE IMMIGRATION ACT OF 1924 DURING THE MONTH OF JULY, 1926, BY COUNTRY OR AREA OF BIRTH—Continued

[Quota immigrant aliens are charged to the quota; nonimmigrant and nonquota immigrant aliens are not charged to the quota]

Country or area of birth	Annual quota	Admitted during July, 1926		
		Quota im-migrant	Nonimmi-grant and nonquota immigrant	Total
Cameroon (British).....	100			
Cameroon (French).....	100			
Egypt.....	100	8	15	23
Ethiopia.....	100			
Liberia.....	100			
Morocco.....	100		1	1
Ruanda and Urundi.....	100			
South Africa, Union of.....	100	8	46	54
South West Africa.....	100			
Tanganyika.....	100			
Togoland (British).....	100			
Togoland (French).....	100			
Other Africa.....	(1)	3	14	17
Total, Africa.....	1,200	19	76	95
Australia.....	121	12	439	451
Nauru.....	100			
New Zealand.....	100	2	135	137
New Guinea.....	100			
Samoa.....	100		4	4
Yap.....	100			
Other Pacific.....	(1)		17	17
Total, Pacific.....	621	14	595	609
Canada.....			7,378	7,378
Newfoundland.....			344	344
Mexico.....			7,064	7,064
Cuba.....			1,245	1,245
Dominican Republic.....			79	79
Haiti.....			20	20
British West Indies.....	(1)	31	507	538
Dutch West Indies.....	(1)		18	18
French West Indies.....	(1)	1	6	7
British Honduras.....	(1)	5	6	11
Canal Zone.....				
Other Central America.....			373	373
Brazil.....			110	110
British Guiana.....	(1)	5	20	25
Dutch Guiana.....	(1)		1	1
French Guiana.....	(1)			
Other South America.....	(1)		448	448
Greenland.....	(1)			
Miquelon and St. Pierre.....	(1)		2	2
Total, America.....		42	17,621	17,663
Grand total, all countries.....	164,667	7,233	31,146	38,379

¹ Annual quota for colonies, dependencies, or protectorates in Other Europe, Other Asia, Other Africa, Other Pacific, and in America is included with the annual quota for the European country to which they belong. Quota for Turkey in Asia is included with that for Turkey in Europe.

TABLE 5.—ALIENS ADMITTED TO THE UNITED STATES UNDER THE IMMIGRATION ACT OF 1924, DURING THE FISCAL YEAR ENDED JUNE 30, 1926, AND DURING THE MONTH OF JULY, 1926, BY SPECIFIED CLASSES

[The number of immigrants appearing in this table and in Table 4 is not comparable with the number of statistical immigrant aliens shown in the other tables, by races, etc.]

Class	Fiscal year, 1926	July, 1926
<i>Nonimmigrants</i>		
Government officials, their families, attendants, servants, and employees....	5, 666	495
Temporary visitors for—		
Business.....	19, 951	1, 349
Pleasure.....	36, 663	4, 405
In continuous transit through the United States.....	25, 574	2, 425
To carry on trade under existing treaty.....	904	133
Total.....	88, 758	8, 807
<i>Nonquota immigrants</i>		
Wives of United States citizens.....	¹ 6, 810	¹ 647
Children of United States citizens.....	¹ 4, 344	¹ 399
Residents of the United States returning from a visit abroad.....	83, 754	5, 965
Natives of Canada, Newfoundland, Mexico, Cuba, Haiti, Dominican Republic, Canal Zone, or an independent country of Central or South America.....	¹ 150, 299	¹ 14, 517
Their wives.....	¹ 965	¹ 34
Their children.....	¹ 190	¹ 17
Ministers of religious denominations.....	664	64
Wives of ministers.....	235	35
Children of ministers.....	436	40
Professors of colleges, academies, seminaries, or universities.....	151	11
Wives of professors.....	39	1
Children of professors.....	26	
Students.....	1, 920	148
Veterans of the World War.....	72	395
Wives of veterans.....	3	24
Children of veterans.....	8	42
Total.....	249, 916	22, 339
Quota immigrants (charged to quota).....	157, 432	7, 233
Grand total admitted.....	406, 106	38, 379

¹ Does not include aliens born in nonquota countries who were admitted as Government officials, visitors, transits, etc.

² Women and unmarried children under 18 years of age born in quota countries.

Operation of the 1924 Immigration Act

THE immigration act of 1924 has accomplished an immense amount of good, according to an address by Hon. Henry H. Curran, Commissioner of Immigration at Ellis Island, N. Y., published in the proceedings of the Twenty-sixth New York State Conference of Charities and Correction.

The commissioner reported that, even with immigration reduced 50 per cent under the new law, the United States takes in more immigrants than any other country.

Last year a million dollars a week were spent in the city of New York through one agency and another, * * * in helping through charity and correction immigrants and the children of immigrants. The figures have been carefully worked out, and the most conservative estimate allotted fifty millions a year to take care of the immigrants because there are so many. Now there are fewer. I know day nurseries that are closing up. I know perfectly rotten—and I use the word advisedly—tenement houses that are being closed up and that never should have been lived in by human beings. We never had a chance to do that while they were coming in in these great swarms. We have a chance now, you and I and all of us, to take care of the limited number we get.

If there is to be a change in the total number of immigrants admitted, Commissioner Curran favors making it smaller for a time. He emphasized the tremendous improvement effected by having the consuls count the prospective immigrants before they leave for the United States, instead of having "those trans-Atlantic quota races when thousands came only to find, through no fault of theirs, they were 10 minutes late and had to go back." Also at present, only 4, instead of 40 or 50, per 1,000 immigrants are rejected. Traffic is now being evenly distributed from month to month and, whereas Ellis Island formerly had to accommodate between two and three thousand immigrants a night, the present average, the commissioner states, is only 600.

The new act, the commissioner acknowledges, has its defects but he does not favor "tinkering" with it by legislative amendments, although he believes that certain administrative changes should be made. In addition to the existing exemption from the quota law of the wives and children under 18 of American citizens the commissioner advocates an exemption of the wives or husbands, the children under 21, and the father and mothers of all aliens who were legally admitted to this country before July 1, 1924, and who are still in the United States.

I think that those families should be united, not by the father going back to Europe but by our allowing the father's family to come here and come at once. It is not good for our society to have these husbands and fathers separated and bereft of their families for one, two, three, or four years. It is not good for the families on the other side. It is bad in every possible way you can look at it. There we have one imperfection in the law which should be changed at once by act of Congress. I ask you to help me. Let's try to get that through. If people fear the additional numbers we can correspondingly reduce the quotas, but I don't think the numbers are so great that we need have anxiety on that account. And if people are measuring it by the strictest dollars-and-cents terms, let them remember that those wives and children and parents are being supported abroad by American money made by the husband and father in America, who might just as well spend it over here as ship it over the ocean.

ACTIVITIES OF STATE BUREAUS

AMONG the labor activities of State bureaus the following, reported either directly by the bureaus themselves or through the medium of their printed reports, are noted in the present issue of the Labor Review.

California.—Changes in volume of employment and pay roll in 741 establishments, page 171.

Illinois.—The following figures on coal mining in Illinois are taken from the forty-fifth coal report of that State covering the latter half of the calendar year 1925:

	All mines
Number of mines operated.....	868
Total output (tons).....	37, 011, 681
Average days worked.....	85
Number of machines used.....	2, 189
Tons mined:	
By machine.....	27, 328, 594
By hand.....	9, 683, 087
Number employed.....	71, 663
Number of accidents:	
Fatal.....	66
Nonfatal.....	1, 460
Tons mined per fatality.....	560, 783
Number of employes per fatality.....	1, 086
Number of fatalities per 1,000 men employed.....	0. 92

Other activities noted in this issue are a survey of public-health services in 15 cities of the State, page 53; and changes in employment and earnings in factories, page 172.

Iowa.—Changes in volume of employment in various industries in the State, page 175.

Maryland.—Report on volume of employment in certain industries, page 176.

Massachusetts.—Changes in volume of employment in various industries in the State, page 176.

New York.—Changes in employment and pay rolls in 1,700 factories, page 177.

Oklahoma.—Changes in employment and pay rolls in 710 establishments in various industries, page 179.

Philippine Islands.—Filipino contract laborers in Hawaii, page 4.

Tennessee.—Report of operations under the State workmen's compensation act, page 58.

PUBLICATIONS RELATING TO LABOR

Official—United States

ILLINOIS.—Department of Mines and Minerals. *Forty-fifth coal report of Illinois, 1925. Springfield, 1926. 235 pp.*

A few figures from this report are given on page 234 of this issue.

— Department of Public Health. *Illinois Health News, May-June, 1926: Report on an appraisal of health service for the year 1925 in 15 Illinois cities conducted by the Illinois Department of Public Health. Springfield, 1926. 110 pp.*

A summary of this report is published on page 53 of this issue.

MASSACHUSETTS.—Department of Labor and Industries. *Annual report for the year ending November 30, 1925. [Boston, 1926?]. 56 pp. Public document No. 104.*

Some statistics on accidents to minors included in the above report were published in the December, 1925, issue (p. 93).

NEW YORK.—Department of Labor. *Special bulletin No. 143: Employment and earnings of men and women in New York State factories, 1923-1925. Albany, 1926. 208 pp., charts.*

Some information on the results of this study, taken from the July, 1926, issue of the Industrial Bulletin of the New York Department of Labor, was published in the Labor Review for September (p. 33).

PENNSYLVANIA.—Department of Labor and Industry. *Labor and Industry, July, 1926. Proceedings of the State-wide Safety Conference, Harrisburg, May 28, 1926. Harrisburg, 1926. 69 pp.*

The proceedings of the annual safety conference held by the Pennsylvania Department of Labor and Industry. The subjects discussed included accidents in the construction industry, safe operation of cranes, eye accidents, industrial electrical accidents, and handling material in a chemical plant.

— Workmen's Compensation Board. *Decisions for the year 1924. Vol. IX. Harrisburg, 1925. 714 pp.*

Texts of the decisions rendered by the board during the year 1924, with case and topical indexes.

PHILIPPINE ISLANDS.—Department of Commerce and Communications. Bureau of Labor. *Labor, March, 1926: Report of the Director of Labor covering investigation of labor conditions and employment of Filipinos in Hawaii. Manila, 1926. 64 pp., chart, illus.*

A summary of the findings of this report is given on page 4 of this issue.

UNITED STATES.—Department of Commerce. Bureau of Mines. *Bibliography of fire hazards and prevention, and safety in the petroleum industry. Part I. Fire hazards and prevention. Part II. Safety and safety devices. Washington, 1926. 9 pp. (Mimeographed.)*

— Department of Labor. Bureau of Labor Statistics. *Bulletin No. 408: Laws relating to payment of wages, by Lindley D. Clark and Stanley J. Tracy. Washington, 1926. iv, 157 pp.*

A digest of this bulletin was published in the Labor Review for August, 1926 (p. 84).

— — — *Bulletin No. 409: Unemployment in Columbus, Ohio, 1921 to 1925, by Frederick E. Croxton. Washington, 1926. iii, 35 pp.*

A summary of this bulletin was published in the Labor Review for July, 1926 (p. 25).

UNITED STATES.—Treasury Department. Public Health Service. *Reprint No. 1004 from the Public Health Reports: Studies on the industrial dust problem. II.—A review of the methods used for sampling aerial dust, by Leonard Greenburg. Washington, 1925. 22 pp.*

This pamphlet contains a description of the different methods of dust sampling, together with a statement of the importance of a knowledge of the dust content of the atmosphere in work places.

Official—Foreign Countries

AUSTRALIA.—Bureau of Statistics. [Tasmania branch.] *Pocket yearbook of Tasmania, 1926. Hobart [1926?]. 142 pp.*

Contains a brief sketch of Tasmania and statistical summaries relating to its financial, social, agricultural, and manufacturing conditions, including cost of living, prices, and wages.

— *Statistics of the State of Tasmania for the year 1924-25. [Hobart?], 1926. [Various paging.]*

Contains data dealing with trade and shipping, agricultural and pastoral production, vital statistics, State finance, and friendly societies.

— (WESTERN AUSTRALIA).—[Court of Arbitration.] *Basic wage declaration [under industrial arbitration act, 1912-1925] and reasons of the court. Perth, 1926. 25 pp.*

A brief summary of the findings of the court appears on page 208 of this issue.

CANADA.—Department of Labor. *Fifth report on organization in industry, commerce, and the professions in Canada. Ottawa, 1926. 152 pp.*

Mainly lists of employers' and trade and commercial organizations. Includes, however, a directory of cooperative societies of various types, and notes in each case the number of members.

— (BRITISH COLUMBIA).—Minister of Mines. *Annual report, for the year ended December 31, 1925. Victoria, 1926. 466 pp., maps, charts, illus.*

The total gross production of the coal mines of the Province for the calendar year 1925 was 2,444,292 tons, a little more than 20 per cent above the output of the preceding year. The number of persons employed in and about the coal mines in 1925 was 5,443, an increase of 25 over the number so employed in the previous year. Only 6 fatal accidents occurred in these mines in 1925.

— (ONTARIO).—Department of Labor. *Sixth annual report, 1925. Toronto, 1926. 75 pp.*

In the Province of Ontario during the fiscal year ending October 31, 1925, the time loss through strikes was 27,477 days—a decline of 71 per cent as compared with the previous year.

— Mothers' Allowances Commission. *Fifth annual report, for the year 1924-25. Toronto, 1926. 23 pp.*

Some data from this report are given on page 59 of this issue.

FEDERATED MALAY STATES.—*Perak administration report for the year 1925. Kuala Lumpur, 1926. 18, xxvii pp.*

A review of the year's financial, industrial, and social progress, with appendixes giving statistical data on which the report is based.

GERMANY.—[Reichsarbeitsministerium]. *Reichsarbeitsverwaltung. Jahresberichte der Gewerbe-Aufsichtsbeamten und Bergbehörden für die Jahre 1923 und 1924. Berlin, 1925. 4 vols.*

Annual reports for the years 1923 and 1924 of the factory and mine inspection services of the various German States.

GERMANY.—(PRUSSIA).—Statistisches Landesamt. *Statistisches Jahrbuch für den Freistaat Preussen*. 22. Band. Berlin, 1926. 12*, 281 pp.

The twenty-second issue of the Statistical Yearbook of the Free State of Prussia covering 1925 and preceding years. Of special interest to labor are the tables on housing and building activity, labor disputes, wages, wholesale and retail prices, cost of living, trade schools, labor colonies, and salaries of Government employees.

GREAT BRITAIN.—Mines Department. Safety in Mines Research Board. *Fourth annual report, including a report of matters dealt with by the Health Advisory Committee, 1925*. London, 1926. 63 pp.

The report contains a general account of the work of the board and of the progress of various special studies of coal-mining hazards, safety appliances, etc.

— — — — Paper No. 23: *A method of trapping the dust produced by pneumatic rock drills*, by P. S. Hay. London, 1926. 18 pp., diagrams.

A description of an apparatus designed to control the dust hazard connected with the use of pneumatic rock drills.

— — — — Paper No. 24: *The ignition of firedamp by momentary flames*, by N. S. Walls and others. London, 1926. 18 pp.

This report contains the partial results of a study of the ignition of gases, particularly methane, in coal mines.

— — — — Paper No. 25: *Some problems connected with the determination of the fineness of coal dust*, by E. F. Greig. London, 1926. 31 pp.

A study of methods of determining the fineness of coal dust which are sufficiently accurate to show the hazard present both with respect to the ignition of coal dust and the propagation of flame in a dust cloud.

INDIA.—[Department of Industries?]. *Bulletins of Indian Industries and Labor*, No. 34: *Periods of wage payment*. Simla, 1925. 30 pp.

A series of tables showing for the leading industries of India the periods for which wages are paid and the time which normally elapses between the end of the period in which the wages are earned and the date of payment. As to the period, the most striking fact is the lack of any uniformity. "In scarcely any industry is a single period adopted and in most districts wages vary with the industry." The most common system is payment on a monthly basis; unskilled labor is frequently paid for a shorter period, and the less skilled the labor the shorter the period is likely to be. The waiting period is equally irregular, but tends to be rather long. "In the majority of cases it is probably true to say that the waiting period lies between one-third and one-half of the period of payment; i. e., that monthly payments are normally made 10 to 15 days after the close of the month, fortnightly payments within 5 days to a week after the close of the fortnight, and weekly payments in 2 to 4 days." To offset the difficulty of these long waiting periods, a number of establishments make advances to the worker, sometimes in the form of money loans, but sometimes in the form of rations, which are charged against the wages to be paid.

— (CEYLON).—Department of Census and Statistics. *Census publications, Ceylon, 1921*. Vol. IV: *General tables showing the population by sex, race, age, conjugal condition, birthplace, religion, education, occupation, infirmity, etc., to which are added three tables relating to the statistics of the Maldiv Islands and two appendixes relating to the scheme adopted for the classification and tabulation of occupations in Ceylon*. Colombo, 1926. iv, 386 pp.

— (MADRAS).—Registrar of Cooperative Societies. [Annual report on the working of the cooperative societies act (II of 1912) for the year 1924-25.] [Madras], 1926. 227 pp.

NEW ZEALAND.—Pensions Department. *Twenty-eighth annual report, for the year ended March 31, 1926.* Wellington, 1926. 9 pp.

At the end of March, 1926, there were 49,264 pensions in force, the annual cost being £2,516,281, and the per capita cost, counting only the European population, £1 16s. 9d. (at par, pound = \$4.8665, shilling = 24.3 cents, penny = 2.03 cents). The number of pensions for the aged, for widows, for miners, and for the blind showed an increase as compared with the preceding year, but the war pensions showed a decrease.

Unofficial

AMERICAN BAR ASSOCIATION. *Program of the Forty-ninth annual meeting to be held at Denver, Colo., July 14-16, 1926, including committee and other reports.* [Chicago?], 1926. 172 pp.

Extracts from the report of the committee on commerce, trade, and commercial law, in re an industrial court act for the United States, are given on page 35 of this issue.

AMERICAN FEDERATION OF LABOR. Wisconsin branch. *Proceedings of the thirty-fourth annual convention held at Green Bay, Wis., July 20-23, 1926.* Milwaukee, 1926. 102 pp.

A summary of these proceedings is published on page 122 of this issue.

AMERICAN IRON AND STEEL INSTITUTE. *Annual statistical report for 1925.* New York, 40 Rector Street, 1926. vii, 101 pp.

Annual report for 1925 on production of iron and steel and their products in the United States and Canada, including statistics of imports and exports. Domestic prices of leading iron and steel products, iron ore, and coke are given, as well as English prices of pig iron and rails, over a period of years.

ASSOCIATION DES SYNDICATS MÉTALLURGIQUES PATRONAUX DE LA LOIRE. *La journée de huit heures dans les industries de la métallurgie et du travail des métaux, par M. R. Touchard.* Saint-Étienne, 12 Rue Gérentet, 1925. 95 pp.

This report deals with the effects of the eight-hour day in the French metal industries. The texts of the law of April 23, 1919, and of subsequent decrees are appended.

D'AVENEL, LE VICOMTE G. *Histoire économique de la propriété, des salaires, des denrées et de tous les prix en général depuis l'an 1200 jusqu'en l'an 1800. Tome VII.* Paris, E. Leroux, 1926. 474 pp.

History of wages and prices from the year 1200 up to 1800.

BARNETT, GEORGE E. *Chapters on machinery and labor.* Cambridge, Harvard University Press, 1926. vii, 161 pp.

A reprint of articles previously appearing in various reviews. Deals particularly with the linotype machine, the stone planer, and the Owen's bottle-blowing machine.

BAROU, N., AND WISE, E. F. *The Russian cooperative movement.* London, Moscow Narodny Bank, 1926. 23 pp.

Contains brief accounts of the various phases of the cooperative movement and the central organizations, as well as the latter's latest balance sheets.

BERGER, ERNST. *Arbeitsmarktpolitik.* Berlin, Walter de Gruyter & Co., 1926. 150 pp.

One of a series of popularly written economic handbooks. The subject covered by this volume is the labor market. It discusses first in a general way and with special reference to Germany the conception, nature, and history of the labor market and of the labor-market policy and describes the mediums (Ministry of Labor, State authorities, Federal and State employment offices, and local public labor exchanges) through which this policy is made effective in Germany and in foreign countries. The greater part of the volume is devoted to a description

and explanation of the employment exchanges, vocational guidance and training, apprenticeship schemes, public-works contracts, productive unemployment relief, emigration, pecuniary unemployment relief, and unemployment insurance. The final chapter discusses German and foreign unemployment statistics.

BREWER, JOHN M., and others. *Case studies in educational and vocational guidance.* Boston, Ginn & Co., 1926. xxiv, 243 pp.

Presents for the use of college and university classes and other students of education a series of concrete problems involving educational and vocational guidance and adjustment.

CARNEGIE ENDOWMENT FOR INTERNATIONAL PEACE. Division of Economics and History. *Introduction to the American official sources for the economic and social history of the World War, compiled by Waldo G. Leland and Newton D. Mereness.* New Haven, Yale University Press, 1926. [Various paging.]

One section is devoted to the Department of Labor and War Labor Administration.

——— *Rural Scotland during the war, by David T. Jones and others.* London, Oxford University Press, 1926. xvi, 311 pp., map, charts.

A companion volume to "The Industries of the Clyde Valley during the War," issued under the same auspices in 1924. The four authors contribute monographs respectively on Scottish fisheries during the war, Scottish agriculture, the Scottish agricultural laborer, and Scottish land settlement, and there is an appendix upon the jute industry in Scotland during the war. In the rural communities, as in the cities and manufacturing regions, war conditions called away the workers and involved control of production, hours, wages, and prices. The fishing industry was hard hit, both because of the inroads the war made upon its man power—about two-thirds of the male fishing population joined the forces—and because in Scottish waters fishing was necessarily subordinated to the exigencies of naval strategy. The agricultural population, too, was depleted, and it was necessary to exercise considerable care to prevent the drain from becoming too great. Here, as in England, the area of land under cultivation was increased, intensive cultivation was resorted to, the field of women's work was extended, and conditions of work were more carefully scrutinized. There was an increased realization of the importance to the nation of agriculture, and of the necessity of safeguarding the workers' standard of living. Indirectly, this helped the latter to retain, after hostilities ended, certain improvements in hours and wages, and gave them a conviction that more might be gained in time. "The improvement in their standard of living may not have been all they would like, but following on the long years in which their conditions were practically unchanged, it has proved that conditions are not static and has left the door open to hopes of progressive improvement."

CAZALIS, ÉMILE. *Syndicalisme ouvrier et évolution sociale.* Paris, Marcel Rivière, 1925. xxxvi, 331 pp.

The social side of French syndicalism forms the basis of this study, which deals particularly with tendencies and developments of the past few years. There is a discussion of the social importance of labor organization and of the relation of such organization to public law. The second part of the volume takes up revolutionary syndicalism or the class struggle as represented by the Confédération Générale du Travail, particularly from the beginning of the war to the present time and including the secession of the more radical group from the C. G. T. in 1922, and the foundation by this section of the C. G. T. Unitaire. The third part deals with syndicalism and class collaboration as represented by the Christian and reformist trade-unions, while the concluding section covers the participation of labor organizations in the regulation of national and international problems, with a discussion of the probable social future of syndicalism.

COLUMBIA UNIVERSITY. Teachers' College. *Contributions to education, No. 201: Educational attitudes and policies of organized labor in the United States, by Philip R. V. Curoe. New York, 1926. vii, 201 pp.*

The author declares that child labor, the training of apprentices, and "the educational implications of the shorter working-day" may be considered "the perennial educational problems of organized labor." He holds that the improvement of leisure is one of the driving forces behind present movement for adult workers' education in this country.

CONFÉDÉRATION INTERNATIONALE DES SYNDICATS CHRÉTIENS. *L'Internationale Syndicale Chrétienne, 1922 à 1925. Utrecht, 1926. 345 pp.*

A brief account of the proceedings of the Third International Congress of Christian Trade Unions, included in the above volume, was published in the December, 1925, issue of the Labor Review (p. 197).

DESARNAUTS, JEAN. *Les accidents du travail en agriculture (d'après la loi du 15 Décembre 1922). Paris, J. B. Baillière et Fils, 1925. 215 pp.*

A study of the effects of the French accident insurance law for agricultural workers which was passed in December, 1922. The writer discusses the general principle of occupational risk and its legislative applications, and gives an account of the juridical situation of agricultural workers before the law went into effect, and the field of application of the new law. Other phases of the subject covered are the agricultural labor accident and its compensation, procedure and claims, and insurance organizations. The text of the law, examples of forms to be used in reporting accidents and filing claims, and a short bibliography are appended.

DEUTSCHE GESELLSCHAFT ZUR BEKÄMPFUNG DER ARBEITSLOSIGKEIT. *Schriften, Heft 7: Das Problem der Arbeitslosenversicherung in Deutschland. Berlin, Reimar Hobbing, 1925. 127 pp.*

The minutes of the conference of the German section of the International Association on Unemployment held at Berlin, February 20, 1925. The conference discussed the problem of unemployment insurance in Germany.

— *Schriften, Heft 8: Die wirtschaftliche Lage der geistigen Arbeiter Deutschlands, bearbeitet von Martha Eva Prochownik. Berlin, Reimar Hobbing, 1925. 106 pp.*

The results of an investigation made by the German section of the International Association on Unemployment into the economic situation of intellectual workers in Germany. The volume discusses first in a general way the causes and effects of the unfavorable economic situation of the German intellectual workers and then describes in detail the present situation in the individual professions (theologians, jurists, economists, physicians, dentists, chemists, pharmacists, technicians, engineers, teachers, writers, journalists, artists, actors, singers, military and naval officers, etc.). Other chapters deal with the organizations of intellectual workers and with measures for the prevention of unemployment.

DOTATION CARNEGIE POUR LA PAIX INTERNATIONALE. Section d'Économie et d'Histoire. *Mouvement des prix et des salaires pendant la guerre, par Lucien March. Paris, Les Presses Universitaires de France [1925?]. xii, 335 pp. (Histoire économique et sociale de la guerre mondiale, série française.)*

This historical study of prices and wages in France during the war shows the effects on prices of the invasion of the richest part of the country and the rapidity with which the changed economic conditions, including the increase in imports and the decrease in exports, were reflected in the general price movement. The increases in the living expenses of the workers are also shown in relation to the movement of retail and wholesale prices and a comparison of wages and cost of living shows the periods at which wage increases counterbalanced the increased living costs.

DUNN, ROBERT W. *American company unions: A study of employee representation plans, "works councils," and other substitutes for labor unions.* Chicago, Trade Union Educational League [1926]: 66 pp.

DYCHE, JOHN A. *Bolshevism in American labor unions—a plea for constructive unionism.* New York, Boni & Liveright, 1926. 224 pp.

The author was general secretary of the International Ladies' Garment Workers' Union from 1904 to 1914 and during the past 10 years has been a clothing manufacturer. The book is concerned with the garment trade-unions and not with trade-unions generally.

EUROPA YEAR-BOOK, 1926. London, Europa Publishing Co. (Ltd.), 1926. xxvii, 626 pp.

The first issue of a yearbook devoted to politics, economics, art, and literature. Contains reviews of wage movements and unemployment in Europe during 1925.

FUSS, HENRI. *La prévention du chômage et la stabilisation économique.* Brussels, L'Églantine, 1926. 140 pp.

The author advocates unemployment insurance, regularization of employment in seasonal industries, better distribution of public works over the different years of the economic cycle, stabilization of prices, and free trade as measures toward the prevention of unemployment.

FYFE, HAMILTON. *Behind the scenes of the great strike.* London, Labor Publishing Co. (Ltd.), 1926. 88 pp.

A sympathetic account of the general strike in England.

GAUMONT, JEAN. *Histoire générale de la coopération en France.* Paris, Fédération nationale des Coopératives de Consommation, 1924. 2 vols.

Describes in detail in volume 1 the forerunners of the modern cooperative movement, beginning with the birth and growth of the idea of association among the workers of the city of Lyon during the period 1789 to 1800, and the influence thereon of the conditions following the French Revolution and of such men as Ange, Fourier, and Saint-Simon, showing how the idea gradually spread and discussing the development of cooperative production from 1848 onward; the rise of consumers' cooperation and the People's Bank of Proudhon; the effect of the Second Revolution upon the economic conditions and upon the cooperative movement; the foundation of the first Rochdale consumers' society at Paris in 1864; and finally, cooperation under the Empire. Volume 2 deals with the development of the modern cooperative movement, discussing the spread of the Rochdale societies, the establishment of the first federation of societies (the Workers' Union of Consumers' Societies) and the cooperative congress at Lyon in 1878; the rise of the Nîmes and Socialist schools of thought; the cooperative wholesale society and its predecessors; the development of the workers' productive societies; "conservative cooperation," i. e., cooperative credit and agricultural cooperation; and the rôle of the French cooperative movement in the international organization of cooperation.

GIDE, CHARLES. *La lutte contre la cherté et la coopération.* Paris, Association pour l'Enseignement de la Coopération [1925?]. 228 pp.

A reproduction of the lectures given by Professor Gide in his course on cooperation at the college of France. Covers such topics as the effects of high prices; the beneficiaries and victims of high prices; high prices from the point of view of cost of merchandise, including the causes—the war, faults in the present system of distribution, taxes of various sorts, etc.—and the remedies, such as action by the public authorities, by the consumers, and by cooperative societies; and high prices from the point of view of the condition of the currency.

GROAT, GEORGE GORHAM. *An introduction to the study of organized labor in America.* New York, Macmillan Co., 1926. xvii, 532 pp., charts. (Second edition, revised and enlarged.)

INTERNATIONAL FEDERATION OF TRADE UNIONS. *Fourth yearbook, 1926.* Amsterdam, 1926. 686 pp.

In addition to the extensive information concerning the International Federation and its national affiliated centers, some data are given on workers' educational bodies, the International Cooperative Alliance, the Labor and Socialist Alliance, and the Young Workers' Socialist International. Each section of the volume is in three languages—German, French, and English. The latest statistics are for the most part for 1924, although there are a number of references to conditions and occurrences in 1925.

INTERNATIONAL INDUSTRIAL WELFARE (PERSONNEL) CONGRESS. *Report of the proceedings, Flushing, Holland, June, 1925.* Zürich [1926?]. 491 pp.

Reports from 23 different countries were submitted to the congress. At the close of the meeting the interim committee which organized it was superseded by a newly constituted body, the International Association for the Study and Improvement of Human Relations and Conditions in Industry.

INTERNATIONAL WOMAN SUFFRAGE ALLIANCE. Committee for like conditions of work for men and women. *Preliminary report prepared in connection with the Paris congress.* London [1926?]. 8 pp.

Information from this report is given on page 37 of this issue.

JENKS, JEREMIAH W., AND LAUCK, W. JETT. *The immigration problem: A study of American immigration conditions and needs.* Sixth edition, revised and enlarged by Rufus D. Smith. New York, Funk & Wagnalls Co., 1926. xxvii, 717 pp., chart.

JOHNSON, JULIA E. *Government regulation of the coal industry.* New York, H. W. Wilson Co., 1926. 144 pp. *The reference shelf, Vol. IV, No. 1.*

Reprints of selected articles, briefs, and debates with study outlines and bibliographies.

KAHN, RUDOLF. *Die Leinenweberei auf der Schwäbischen Alb.* Jena, Gustav Fischer, 1924. viii, 82 pp. (*Heimarbeit und Verlag in der Neuzeit, 5. Heft*).

A monograph on the linen weaving industry in the Swabian Alps (Wurttemberg, Germany). It describes the development of this industry, the extent of home work, and the social, working, and wage conditions of home workers and workers in mechanical mills, the advantages and disadvantages of home work, and the prospects for both home weaving and mechanical weaving.

LEWISOHN, SAM A. *The new leadership in industry.* New York, E. P. Dutton & Co., 1926. x, 234 pp.

A discussion of the relations of employer and employee written from the standpoint of a modern employer.

MATAGRIN, A. *L'industrie des produits chimiques et ses travailleurs.* Paris, Gaston Doin, 1925. xvii, 486 pp.

The writer gives a history of the development of the chemical industry and an account of the industry at the present time, especially from the standpoint of the influence which recent technical improvements have had upon working conditions where the question of health is of prime importance. The consequences of the war and its effects upon the economic conditions of chemists and of workers are analyzed with a view to determining factors which are favorable to the future of the industry. Considerable attention is given to working conditions, profit sharing and wages, safety and hygiene, social insurance, and apprenticeship and vocational guidance.

MAUER, BERNHARD. *Die deutsche Herrenkonfektion (Organisation und Kalkulation).* Jena, Gustav Fischer, 1922. xii, 83 pp. (*Heimarbeit und Verlag in der Neuzeit, 2. Heft*).

A monograph on the organization of and cost and profit calculation in the German men's clothing industry.

MICHAEL, ERNST. *Die Hausweberei im Hirschberger Tal. Jena, Gustav Fischer, 1925. 79 pp. (Heimarbeit und Verlag in der Neuzeit, 7. Heft.)*

A monograph on home weaving in the Hirschberg Valley (Silesia, Germany) describing its origin, development in the seventeenth, eighteenth, and nineteenth centuries, its present extent, and the social and economic conditions of the weavers.

NATIONAL ASSOCIATION OF MANUFACTURERS. Junior Education and Employment Committee. *Facts about child labor as shown by the actual Government statistics. New York, 50 Church Street, 1926. xvi pp. (Reprinted from Manufacturers Record, Baltimore, Md., July 15, 1926.)*

Graphic presentation of data from the United States Census regarding employment of children.

NATIONAL INDUSTRIAL CONFERENCE BOARD (INC.). *Wages in the United States. New York, 247 Park Avenue, 1926. x, 153 pp., charts.*

Presents the results of wage studies made by the National Industrial Conference Board down to the end of 1925.

NEW YORK STATE CONFERENCE OF CHARITIES AND CORRECTION. *Proceedings, New York City, December 8-11, 1925. [New York, 1926?]. xvi, 271 pp.*

The fifth general session of this conference dealt with industrial problems and included the following subjects: Public responsibility for working conditions, opportunities for vocational training in New York City, and a shorter workday for women in industry.

A digest of an address on the workings of the 1924 immigration law is given on page 232 of this issue.

PETIT, RENÉ-MARCEL. *Les accidents du travail dans l'agriculture. Paris, Albin Michel [1925?]. 245 pp.*

An exposition of the French law of December 15, 1922, on industrial accidents in agriculture. It is intended as a practical guide for employers and workers in agricultural undertakings, giving the conditions under which employees are covered, regulations governing the reporting of accidents, and other information relative to the operation of the law.

PETTER, Sir ERNEST W. *The disease of unemployment and the cure. London: Hutchinson & Co. (Ltd.) [1926?]. 63 pp.*

The writer, who was formerly president of the British Engineers' Association and is prominent in the Federation of British Industries, attributes the present prevalence of unemployment in England to the dislocations caused by the war and the failure to reestablish at its close the relation formerly existing between the wages of skilled and unskilled labor.

PIC, PAUL. *Traité élémentaire de législation industrielle—les lois ouvrières. Paris, A. Rousseau, 1922. xxv, 1078 pp. 5th edition.*

A treatise on French labor laws which has been entirely revised in this fifth edition, covering labor legislation through the year 1925. The tendencies noted in the more recent legislation relating to labor are an extension of trade-union rights, as exemplified by the laws upon collective bargaining and the civil rights of trade-unions; stricter regulation of labor conditions through the enactment of the eight-hour law; restrictions on the conclusion of collective agreements, as shown by the establishment of minimum wages for home workers; gradual extension of the field of cooperation and profit sharing, implying a certain amount of participation by the employees in the management of enterprises; and the development of social economic institutions, such as savings and loan associations, cheap dwellings, and insurance and social assistance.

SUFFERN, ARTHUR E. *The coal miners' struggle for industrial status: A study of the evolution of organized relations and industrial principles in the coal industry.* New York, Macmillan Co., 1926. xviii, 462 pp.

This study traces the development of collective bargaining in the coal industry; describes the present organizations of miners and operators, principles upon which the joint conference is founded, and methods used for enforcing agreements and adjusting disputes thereunder; and discusses the problems involved in the further extension of collective bargaining.

THOMAS, DOROTHY SWAINE. *Social aspects of the business cycle.* London, George Routledge & Sons (Ltd.), 1925. xv, 217 pp., charts.

A study of the correlation between periods of business prosperity and depression and various social factors, including emigration.

TINSLEY, JOHN F. *New phases of industrial management.* Worcester, Mass., 1926. 198 pp., chart.

A collection of addresses on various phases of industrial relations, industrial safety, employees' savings plans, and Americanization.

UNIVERSITÄT LEIPZIG. Institut für Arbeitsrecht. *Schriften, 10. Heft: Die gesetzliche Regelung der Arbeitszeit, von Gerhard Jäkel.* Berlin, Reimar Hobbing, 1926. 106 pp.

A systematic compilation of the German legal regulations relating to hours of labor. The author has devoted one chapter to the historical development of legal regulation of the hours of labor, and another to the legal origin of such legislation and to its scope. He then discusses the principle of the eight-hour day and exceptions thereto, such as overtime work performed on request of the employer, on agreement with the works council, in accordance with collective agreements, or authorized by decree of the authorities, as well as the legal limits to overtime work. He also enumerates the special regulations as to hours of labor in establishments in which the work is injurious to health or specially fatiguing. Other chapters deal with obligation to perform overtime work, distribution of the hours of labor, and enforcement of legal regulation of the hours of labor.

WILSON, J. HAVELOCK. *My stormy voyage through life.* Vol. 1. London, Cooperative Printing Society (Ltd.), 1925. [x] 287 pp., illus.

The autobiography of the president of the National Sailors' and Firemen's Union of Great Britain.